DOCUMENT RESUME

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TITLE Adult Competency Education Kit. Basic Skills in Speaking, Math, and Reading for Employment. Part H. ACE Competency Based Job Descriptions: #25--Household Appliance Mechanic; #26--Lineworker; #27--Painter Helper, Spray; #28--Painter, Brush; #29--Carpenter Apprentice.

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IDENTIFIERS Adult Competency Education Project; California (San Mateo County); Gas Appliances; *Line Repairers

ABSTRACT

This fifth of fifteen sets of Adult Competency Education (ACE) Competency Based Job Descriptions in the ACE kit contains job descriptions for Household Appliance Mechanic; Lineworker; Painter Helper, Spray; Painter, Brush; and Carpenter Apprentice. Each begins with a fact sheet that includes this information: occupational title, D.O.T. code, ACE number, career ladder, D.O.T. general educational developmental level, site(s) at which job can be observed, job requirements, and job description (D.O.T.). The following pages list twenty to forty competencies (specific math and communicative activities) needed to function successfully in the occupation. Each competency is presented as (1) exact skill found to have been essential to the job during an on-site employee interview, (2) measurable instructional objective defining the skill (performance criterion, not job related), and (3) specific task with which to test a student's ability at the skill (the job-related performance criterion). (Instructional objectives match those in the ACE Taxonomy as indicated by a code identifying unit, item, and specific objective.) Skills that are prerequisite to the competencies are noted. (Additional job descriptions, kit manuals, and the project final report are also available in ERIC--see Note.) (YLB)

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a project of the career preparation centers

Adult Competency Education kit

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PART H

ACE COMPETENCY BASED JOB DESCRIPTIONS:

25 - Household Appliance Mechanic
26 - Lineworker
27 - Painter Helper, Spray
28 - Painter, Brush
29 - Carpenter Apprentice

BASIC SKILLS IN SPEAKING, MATH, AND READING FOR EMPLOYMENT

CE 016 826

Products and Processes
Developed by the
Adult Competency Education Project
Director, Joe Cooney

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NOTE

JOB DESCRIPTION NUMBERS. ACE investigated 100 jobs and developed 68 of them into Competency Based Job Descriptions. The above 68 are numbered according to the original listing. The gaps are in the numbering only. This is a complete list of the ACE Competency Based Job Descriptions.

A.C.E. COMPETENCY BASED JOB DESCRIPTION 25

OCCUPATIONAL TITLE: HOUSEHOLD APPLIANCE MECHANIC

COMPETENCY BASED JOB DESCRIPTION FACT SHEET

OCCUPATIONAL TITLE: Household Appliance Mechanic

D.O.T. CODE: 827.281 (4th Ed.; 827.261-010)

A.C.E. NUMBER: 25

CAREER LADDER:

FIRST LEVEL: Household Appliance Mechanic

SECOND LEVEL: Appliance - Service Supervisor'

THIRD LEVEL: Appliance Repair - Shop Owner

D.O.T.'s General Educational Development Level: 4

SITE WHERE THE JOB CAN BE OBSERVED:

Nesco Appliance and Service
1722 Gilbreth Road
Burlingame, CA 94010

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Number of Annual Jobs in San Mateo County 76. This number is based upon the San Francisco-Oakland SMSA, U.S. Census Manpower projections and the quarterly employment security application record system reports on local San Mateo County Employment Development Department job opening activity.

Usual Entrance Requirements: Application form, interview with emphasis on mechanical ability, neat performance in writing, rapport with co-workers.

JOB DESCRIPTION (D.O.T.): Repairs gas and electric appliances and equipment, such as refrigerators, ranges, washing machines, hot-water heaters, toasters, and irons, using hand tools; Disassembles appliances and examines parts for defects. Repairs defective parts, using hand tools. Advises customer on use and care of appliance. May estimate cost of repairs. May install appliances. Might be designated as ELECTRICAL-APPLIANCE SERVICEMAN: GAS-APPLIANCE SERVICEMAN.

THE ACADEMIC REQUIREMENTS FOR THE JOB OF HOUSEHOLD APPLIANCE MECHANIC

Below are listed first in general terms and then in specific competencies the math and communication activities which a person must typically be able to carry out to function successfully as a household-appliance mechanic.

The right hand column lists the exact competencies found to have been essential to the job in our on-site employee interview. This column also notes the skills which are prerequisite to those competencies.

The center column* states the skills in more general language. The controlled language of this column permits comparison of skills between occupations.

* The items in the center column have been abstracted from an abbreviated version of the taxonomy of generic skills developed by Kawula, W., and Smith, A. De W., Generic Skills Handbook of Occupational Information, Training Research and Development Station, Prince Albert, Saskatchewan, 1975.

1A.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to order new parts to replace worn or broken parts.

To accomplish this task, the student must be able to copy parts numbers from catalogues onto order forms.

To demonstrate the ability to perform this task, the student will copy the following parts numbers with 100% accuracy:

4795165
8810345
7979160
3221437

1A.2 Prerequisite to 1A.5 — Identify place value of digits in a given whole number with up to seven digits.

1A.3 Prerequisite to 1A.5 — Read a given whole number less than ten million and write its name in words.

1A.4 Prerequisite to 1A.5 — Write a whole number less than 10 million given the word name of the number.

1A.5 The HOUSEHOLD APPLIANCE MECHANIC must be able to verify the number of items delivered from a parts house.

To accomplish this task, the student must be able to count a set of objects and write the total.

To demonstrate the ability to perform this task, the student will count the number of books on a table and write the total on a piece of paper.

1B.1 Prerequisite to 1B.2 — Perform addition of whole numbers given instructions such as:

What is the total of 5 and 8?
8 + 5 = ____.
8 plus 5 is ____.
Find the sum of 8 and 5.
Add 8 and 5.

$$\begin{array}{r} 8 \\ +5 \\ \hline \end{array}$$

1B.2 The HOUSEHOLD APPLIANCE MECHANIC must be able to keep a running total of inventory.

To accomplish this task, the student must be able to add whole numbers.

To demonstrate the ability to perform this task, the student will determine that:

137 fuses in stock
+294 fuses delivered
431 total fuses

1B.3 Prerequisite to 1B.4

Perform subtraction of whole numbers given instructions such as:

8 minus 5 is ____.
If you had 8 and gave away 5, you would have ____.
Subtract 5 from 8.
Find the difference of 8 and 5.
8 - 5 = ____.

$$\begin{array}{r} 8 \\ -5 \\ \hline \end{array}$$

1B.4 The HOUSEHOLD APPLIANCE MECHANIC must be able to keep track of inventory in order to have enough stock on hand at all times.

To accomplish this task, the student must be able to subtract whole numbers.

To demonstrate the ability to perform this task, the student will perform the problem below and determine that 19 electrical cords are left:

86 electric cords in stock
67 cords used this month.

1B.5 The HOUSEHOLD APPLIANCE MECHANIC must be able to give estimates over the phone.

To accomplish this task, the student must be able to work out costs based on oral conversation.

To demonstrate the ability to perform this task, the student will determine that, if the customer needs a motor costing $26, and the labor to put in that motor is $15, less a discount of $5 plus $3 tax, the estimated cost would be $39.

1C.1 Prerequisite to 1C.2

Perform multiplication of whole numbers given instructions such as:

6 times 2 is ____. $6 \times 2 = ____$.
Three two's are ____.
The product of 6 and 2 is ____. $\begin{array}{r} 6 \\ \times 2 \end{array}$

1C.2 The HOUSEHOLD APPLIANCE MECHANIC must be able to work with Ohm's Law when working on electrical systems.

To accomplish this task, the student must be able to multiply whole numbers.

To demonstrate the ability to perform this task, the student will determine that 5 amperes x 110 volts = 550 watts.

1C.3 Prerequisite to 1C.4

Perform division of two simple whole numbers (no remainder) given instructions such as:

6 divided by 2 is ____. $6 \div 2 = ____$.
2 into 6 goes ____. $2\overline{)6} = ____$.
The quotient of 6 divided by 2 is ____. $\frac{6}{2} = ____$.

1C.4 The HOUSEHOLD APPLIANCE MECHANIC must be able to find values of resistance given voltage and current.

To accomplish this task, the student must be able to divide whole numbers.

To demonstrate the ability to perform this task, the student will determine that 110 volts ÷ 5 amps = 22.

3B.1 Prerequisite to 3E.3

Calculate the sum of a set of decimal fractions.

3B.2 Prerequisite to 3E.4

Calculate the difference of two decimal fractions.

3C.1 Prerequisite to 3E.5

Calculate the product of two decimal fractions when rounding off is (a) required, and (b) not required.

3C.2 Prerequisite to 3E.5 State or write the product of a number and a power of ten between .001 and 1,000 without written calculation.

3E.3 The HOUSEHOLD APPLIANCE MECHANIC must be able to fill out estimate sheets for customers.

To accomplish this task, the student must be able to add columns of dollars and cents.

To demonstrate the ability to perform this task, the student will add the following numbers and determine that the total is $52.90:

$48.23
$ 1.67
$ 3.00

3E.4 The HOUSEHOLD APPLIANCE MECHANIC must be able to provide discounts to selected wholesale customers.

To accomplish this task, the student must be able to subtract amounts of discount from total cost.

To demonstrate the ability to perform this task, the student will perform the operations below and determine that the cost is $2,746.25:

$3,198.31 total cost
$ 452.06 less discount

3E.5 The HOUSEHOLD APPLIANCE MECHANIC must be able to compute the price of several resistors used in repair work.

To accomplish this task, the student must be able to calculate the total cost of several items of equal value.

To demonstrate the ability to perform this task, the student will determine that 16 resistors, each costing 26¢ amounts to $4.16.

3E.7 The HOUSEHOLD APPLIANCE MECHANIC must be able to figure discounts to the nearest cent.

To accomplish this task, the student must be able to round off decimals to the nearest cent.

To demonstrate the ability to perform this task, the student will determine that a discount of $58.638 is rounded off to $58.64, while a discount of $312.472 is rounded down to $312.47.

4A.1 Prerequisite to 4B.1 Identify a percent as equivalent to a fraction with 100 as the denominator.

4B.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to figure discounts for selected customers.

To accomplish this task, the student must be able to calculate a percent of a number of the following types:

5% of 170 = ___.
5.7% of 170 = ___.
5.7% of 17.43 = ___.

To demonstrate the ability to perform this task, the student will determine that a 20% discount on $500 is $100.

6G.2 The HOUSEHOLD APPLIANCE MECHANIC must be able to explain how long it took for a job.

To accomplish this task, the student must be able to measure the actual duration of time expended to perform routine functions, correct within 5% of actual duration.

To demonstrate the ability to perform this task, the student will, given a stapler and a box of staples, open the stapler and fill it with staples from the box, and then he will tell the instructor how long it took to perform this task.

6K.3 The HOUSEHOLD APPLIANCE MECHANIC must be able to give rough estimates to his customers.

To accomplish this task, the student must be able to calculate, given a simple and familiar job, unit costs and wage or salary rates, estimate the units of material and hours/days of work and calculate total costs.

To demonstrate the ability to perform this task, the student will determine that a job which takes 4 hours (at $8/hour) and uses parts which total $18 would cost $50.

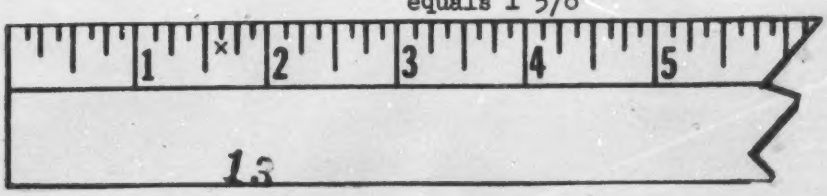
8A.5 The HOUSEHOLD APPLIANCE MECHANIC must be able to take measurements when he installs appliances to ensure that there is enough space to fit them inside.

To accomplish this task, the student must be able to write the measurement indicated on a sketch of a graduated scale:

a. to the nearest whole number when the scale is marked off in consecutive whole numbers with or without subdivisions.
b. to a given precision when the scale is marked off in multiples of a whole number with or without subdivisions.
c. to a given precision when the scale is marked off in whole numbers with or without subdivisions representing fractions such as halves, quarters, eighths, sixteenths, tenths or fifths.

To demonstrate the ability to perform this task, the student will examine the scale below and determine that:

1. X to the nearest inch equals 2"
2. X to the nearest 1/2 inch equals 1 1/2"
3. X to the nearest 1/4 inch equals 1 1/2" or 1 3/4"
4. X to the nearest 1/8 inch equals 1 5/8"

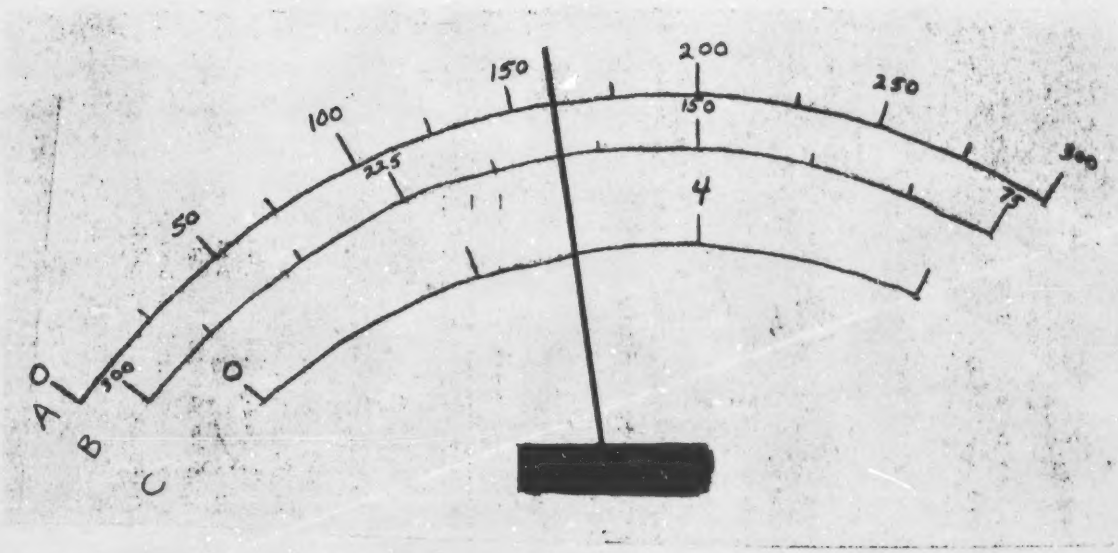


8A.6 The HOUSEHOLD APPLIANCE MECHANIC must be able to use ohmeters and other measuring devices when working with electrical appliances.

To accomplish this task, the student must be able to write the measurement indicated on a sketch of a combination of scales which may be circular and read in either a clockwise or counterclockwise direction, such as on a gas or electric meter.

To demonstrate the ability to perform this task, the student will read the scales below and determine that:

1. scale A reads approximately 160
2. scale B reads approximately 184
3. scale C reads approximately 2.75

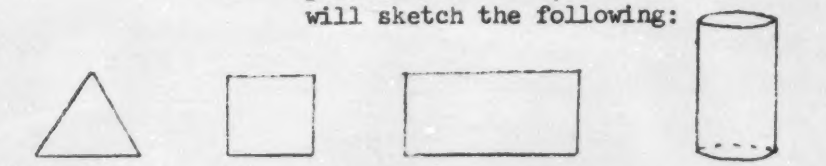


11A.1 **Prerequisite to 11C.1** Identify rectangles, squares, triangles, circles, rectangular solids, cubes, pyramids, cones, cylinders and spheres, from a set of objects, pictures of objects, or names of objects.

11C.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to reassemble parts of an appliance correctly.

To accomplish this task, the student must be able to draw or sketch (not to scale) (student choice) squares, rectangles, triangles, circles, cubes, rectangular solids, cylinders, cones, and pyramids.

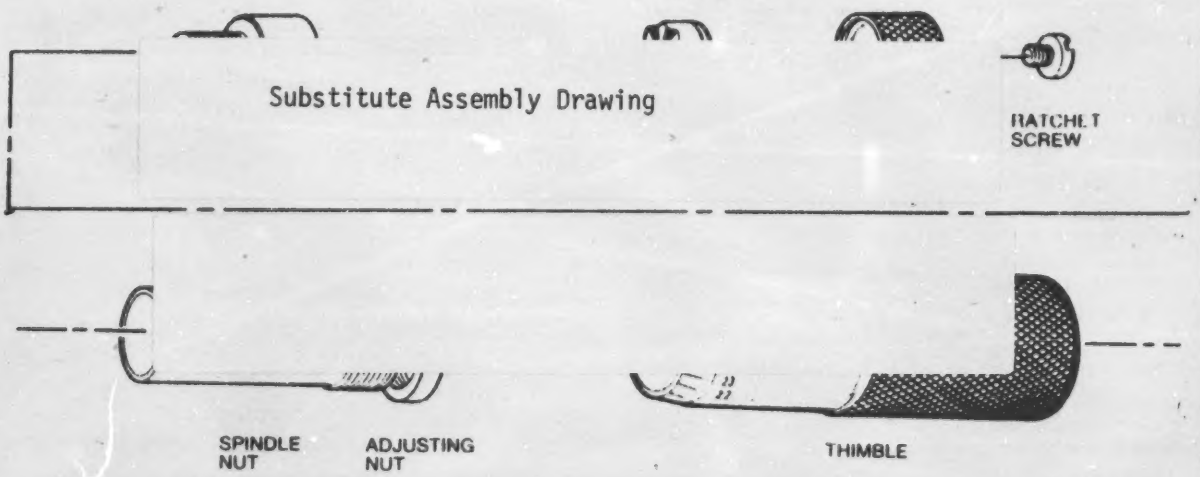
To demonstrate the ability to perform this task, the student will sketch the following:



12D.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to reassemble parts he has taken apart and repaired.

To accomplish this task, the student must be able to identify the order in which parts are put together in an assembly drawing.

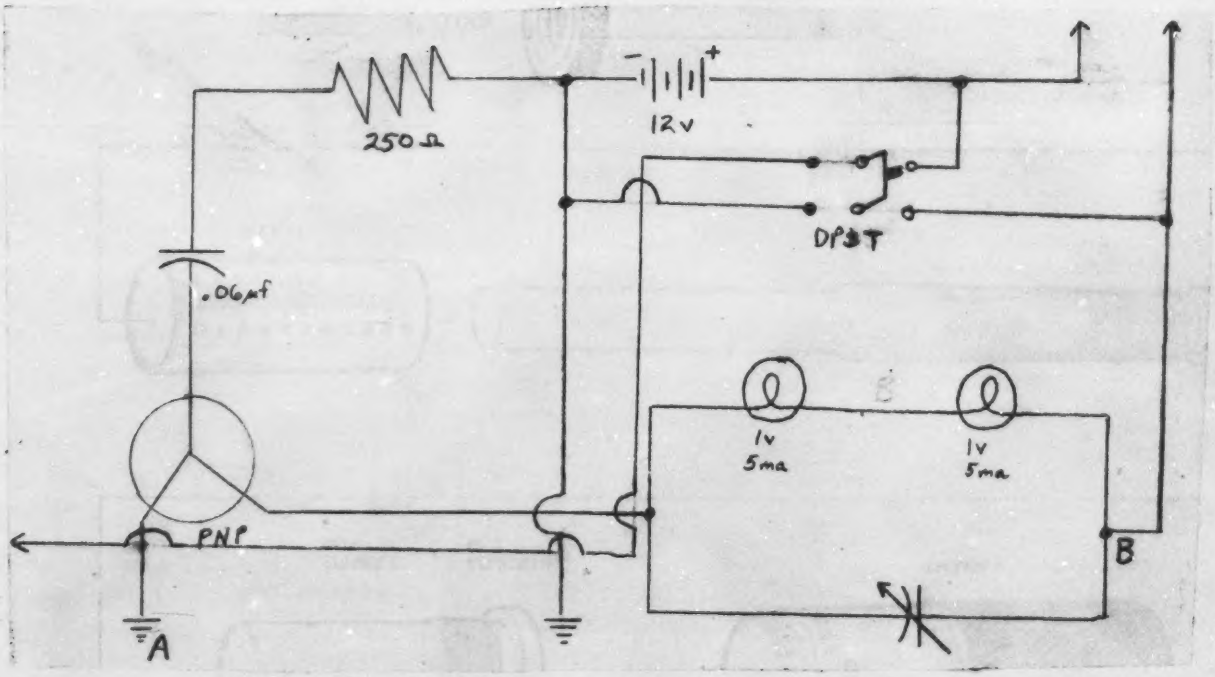
To demonstrate the ability to perform this task, the student will study the drawing below and determine the order of assembly of these parts.



12E.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to work with electrical appliances.

To accomplish this task, the student must be able to trace a particular sub-system on a simple schematic drawing.

To demonstrate the ability to perform this task, the student will examine the schematic below and trace the wire marked A to point B:



13A.1 Prerequisite to 13A.2 Given letters of the alphabet in manuscript form and in random order, read each letter and pronounce each letter correctly.

13A.2 The HOUSEHOLD APPLIANCE MECHANIC must be able to find parts in different sections of the warehouse.

To accomplish this task, the student must be able to, given the letters of the alphabet in manuscript form and in random order, read each letter correctly in the proper alphabetical order.

To demonstrate the ability to perform this task, the student will rank the following letters in correct alphabetical order:

B, X, G, M, A, Y, N

15A.1 Prerequisite to 15A.2 Read a list of 50 words from a series of commonly used terms (e.g., from the Dolch List).

15A.2 The HOUSEHOLD APPLIANCE MECHANIC must be able to install new parts correctly.

To accomplish this task, the student must be able to read words from the labels of frequently used products or of products used in a given occupation.

To demonstrate the ability to perform this task, the student will read the label below and explain the difference between part GB-896 and GB-853 installations:

The GB-896 snap action switch has wiring opposite to the GB-853 switch. The red wire to the hot gas circuit goes to the bottom terminal, the green line for incoming power stays in the center, and the yellow line to the pump circuit goes to the top terminal.

15A.3 The HOUSEHOLD APPLIANCE MECHANIC must be able to converse with customers and fellow workers.

To accomplish this task, the student must be able to read and use in an oral sentence words from a list of words common to the vocabulary of a given occupation.

To demonstrate the ability to perform this task, the student will match the following with 90% accuracy:

1.	appliance	A. an appliance serviceperson who is learning the trade
2.	circuit	B. diagonal cutting pliers
3.	cylinder	C. a complete path for electrical current
4.	scale	D. a strip of easily melted metal placed in a circuit as a safeguard
5.	fuse	E. a metal pin with a head on one end and screw threads on the other used with a nut as a fastener
6.	"dikes"	F. a household or office mechanism
7.	journeyman	G. a device which heats up and is used to apply metal alloys to patch or join metals together
8.	thermostat	H. the piston chamber in an engine or hydraulic system
9.	soldering iron	I. an appliance repairperson who has enough training and experience to work on his own
10.	apprentice	J. a graduated line used for measurement
11.	bolt	K. a device for regulating temperatures

KEY: 1-F, 2-C, 3-H, 4-J, 5-D, 6-B, 7-I, 8-K, 9-G, 10-A, 11-E.

15B.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to find items safely and efficiently in a warehouse.

To accomplish this task, the student must be able to read aloud and explain a series of common functional signs (e.g., safety signs, road signs etc.).

To demonstrate the ability to perform this task, the student will read the three signs below and explain to the instructor their meanings:

16A.2 Prerequisite to 16A.4 Interpret terminology and abbreviations frequently found in forms.

16A.3 Prerequisite to 16A.4 Identify various kinds of forms by stating the kind of information to be recorded.

16A.4 The HOUSEHOLD APPLIANCE MECHANIC must be able to answer customer questions about estimates.

To accomplish this task, the student must be able to, given a variety of common business forms such as word orders, job orders, issue and receipt vouchers, claims and purchase orders, answer factual questions based on the data on the forms.

To demonstrate the ability to perform this task, the student will turn to appendix 25A and explain to the instructor the parts ordered and their prices, the company it is billed to, and the shipping date.

16A.4 cont'd The HOUSEHOLD APPLIANCE MECHANIC must be able to verify his pay.

To accomplish this task, the student must be able to read his paycheck.

To demonstrate the ability to perform this task, the student will determine that the gross pay on the check below is $190.40, that his withholding tax is $25.50 and his F.I.C.A. is $8.00, and that his net pay is $156.90.

Name Louis Stacey				
From 8/19		To 9/1		Incl.
Regular			190.	40
Overtime				
Total Earnings			190.	40
wh/tax	25.	50		
F.I.C.A.	8.	00		
Total Deductions			33.	50
Amount of Check			156.	90

No. 153

September 8, 19 67

PAY TO THE ORDER OF Louis Stacey $ 156.90

One hundred fifty-six and 90/100 ---------- DOLLARS

33RD AND BROADWAY OFFICE
Valley National Bank
OAKLAND, CALIFORNIA

Tristram Shandy

16B.1 Prerequisite to 16B.3 Describe the uses of charts and tables and define them as a visual way to give information in a compact and organized form.

16B.2 Prerequisite to 16B.3 State the type of information recorded on given charts or tables.

16B.3 Prerequisite to 16D.4 Given common reference tables and charts such as organization charts, parts charts, reference tables, including charts and tables designed in matrix form (rows and columns), answer factual questions based on the data supplied.

16D.1 Prerequisite to 16D.3 Identify a manual as a handbook of instructions and/or information related to one topic, and give an example of a manual.

16D.2 Prerequisite to 16D.3 Identify the particular kind of information or directions included in a given manual, using the title, table of contents, and/or index.

16D.3 The HOUSEHOLD APPLIANCE MECHANIC must be able to troubleshoot and repair items which he is unfamiliar with.

To accomplish this task, the student must be able to identify the parts of a given manual which apply to a given situation using the table of contents and/or index as guide.

To demonstrate the ability to perform this task, the student will examine 25C and determine that information about troubleshooting is described on pages 50-53 and that a parts list begins on page 67 for a water valve.

16D.4 The HOUSEHOLD APPLIANCE MECHANIC must be able to order parts as spares or replacements.

To accomplish this task, the student must be able to, given a typical parts manual, locate a particular part and answer factual questions about its description (e.g., price, code number, vendor, etc.).

To demonstrate the ability to perform this task, the student will look at 25B and find the part number and price for the following parts;

Defrost Solenoid Valve (115 volt 50/60 cycle);
"O" Ring, Defrost Valve;
Delrin Seat.

In addition, the student will point out the diagrams of each part on 25B to the instructor.

16D.6 The HOUSEHOLD APPLIANCE MECHANIC must be able to function effectively within his union.

To accomplish this task, the student must be able to, given a typical company manual or union agreement containing administrative, policy, personnel and financial rules and regulations, answer factual questions based on the manual for items such as hours of work, rates of pay, vacation or other leave, grievances, promotion and discipline.

To demonstrate the ability to perform this task, the student will examine the Independent Material Dealer's Agreement or a similar union agreement, and locate:

1. the paid holidays.
2. the rate of pay for a Mechanical Loader.
3. the standard hours of work.

17A.4 Prerequisite to 19A.10 Identify statements as being true or false after reading a given selection.

17A.7 Prerequisite to 19B.9 Do an exercise that requires recall of given instructions or information.

17A.13 Prerequisite to 19B.9 Given a set of written instructions involving activities to be performed by a number of people, and the particular roles, prepare a list and sequence of activities to be performed.

19A.10 The HOUSEHOLD APPLIANCE MECHANIC must be able to use a customer's complaint as a starting point for diagnosis of an appliance.

To accomplish this task, the student must be able to answer "who", "what", "where", "when" and literal "why" questions based on spoken information.

To demonstrate the ability to perform this task, the student will listen to the teacher read this selection and then answer what, where and when;
I put a full load into my washing machine this morning, and when I came back to check on it at 10:00, there was smoke coming from underneath the agitator which was stopped.

19A.12 Prerequisite to 19B.9 List directions that were given by a speaker.

19A.13 Prerequisite to 19B.9 Perform a series of two or three activities which require recall or oral instructions. (The activities to be within the abilities of the student - recall is the item to be demonstrated.)

19B.5 The HOUSEHOLD APPLIANCE MECHANIC must be able to find out what went wrong with an appliance.

To accomplish this task, the student must be able to identify what additional information you would like to know after hearing a conversation.

To demonstrate the ability to perform this task, the student will listen to the following and decide that an address is needed:

"I'm Judy and my refrigerator doesn't work. All of my food is getting warm. Can you come immediately?"

19B.9 The HOUSEHOLD APPLIANCE MECHANIC must be able to follow directions from his supervisor about special problems or "rush" orders.

To accomplish this task, the student must be able to perform a series of two or three activities which require recall of oral instructions and an interpretation of how the instructions were to be fulfilled. (The activities to be within the abilities of the student - recall and interpretation are the items to be demonstrated.)

To demonstrate the ability to perform this task, the student will listen to the following instructions and then perform these tasks: (in the implied sequence)

1. fill the stapler with staples.
2. close one of the curtains.
3. ask where the box of staples is kept.
4. open the curtain you have closed.

21A.2 The HOUSEHOLD APPLIANCE MECHANIC must be able to fill out a time sheet.

To accomplish this task, the student must be able to, given dates of the year, locate dates on a current calendar.

To demonstrate the ability to perform this task, the student will examine a calendar and write down the date for the following Friday and Monday for the instructor.

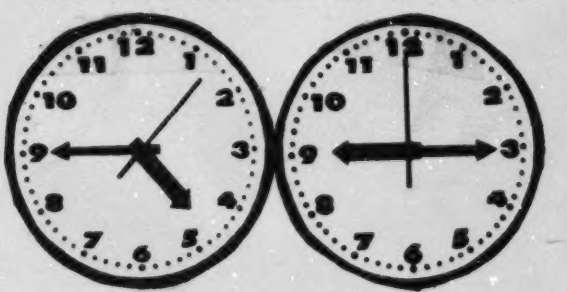
21A.4 Prerequisite to 21A.5 Given a standard clock, tell correct time to within 5 minutes of actual time.

21A.5 The HOUSEHOLD APPLIANCE MECHANIC must be able to write out work orders when he has finished a job.

To accomplish this task, the student must be able to, given times of the day, write time:

a. 8:00
b. eight o'clock
c. 8 o'clock

To demonstrate the ability to perform this task, the student will look at the clocks below and determine that the times are:



4:45 9:15

22A.1 Prerequisite to 22B.2 Given simple data in the form of words and figures, write phrases on forms which are legible and which convey the desired information.

22B.1 Prerequisite to 22B.2 Given simple data in the form of words and figures, write complete sentences on forms which are legible and which convey the desired information.

22B.2 The HOUSEHOLD APPLIANCE MECHANIC must be able to fill out an application for employment.

To accomplish this task, the student must be able to complete a sample application form for employment in a legible manner.

To demonstrate the ability to perform this task, the student will complete 25-D correctly and legibly.

22B.7 The HOUSEHOLD APPLIANCE MECHANIC must be able to fill out tax forms for federal income tax.

To accomplish this task, the student must be able to complete provincial and federal government forms which are in current use for income tax, medical and hospital services, census, etc.

To demonstrate the ability to perform this task, the student will fill out the form below as if he were employed.

#25

Form **W-4**
(Rev. Sept. 1974)
Department of the Treasury
Internal Revenue Service

Employee's Withholding Allowance Certificate

(This certificate is for income tax withholding purposes only; it will remain in effect until you change it.)

Type or print your full name

Your social security number

Home address (Number and street or rural route)

Marital status
☐ Single ☐ Married
(If married but legally separated, or spouse is a nonresident alien, check the single block.)

City or town, State and ZIP code

1 Total number of allowances you are claiming . . . . . .

2 Additional amount, if any, you want deducted from each pay (if your employer agrees) . . . . . $

I certify that to the best of my knowledge and belief, the number of withholding allowances claimed on this certificate does not exceed the number to which I am entitled.

Signature ▶ ..... Date ▶ ....., 19.....

22H.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to fill out purchase orders.

To accomplish this task, the student must be able to, given a typical business form, purchase order, job order, sales slip, and necessary data in words and figures, correctly complete or fill out the appropriate portions of the form.

To demonstrate the ability to perform this task, the student will fill out 25-E with the following information:

1 bellow #11064 at $.33 per unit, 4¢ tax, and 66¢ transportation.

24A.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to keep a daily log of his work.

To accomplish this task, the student must be able to, given real or simulated occupational conditions in which the student can use a variety of his senses, prepare a written factual report which is correct, concise and reasonably complete.

To demonstrate the ability to perform this task, the student will fill in 25F with his name and these activities for Friday:

6 counter customers, 4 phone calls, worked on models 37,468,48(2), 81,410.

Also, fill in weekly summary and sign.

25C.6 The HOUSEHOLD APPLIANCE MECHANIC must be able to answer customer's questions over the telephone.

To accomplish this task, the student must be able to practice, using inter-office or simulated phones, making and receiving a variety of local and long-distance telephone calls.

To demonstrate the ability to perform this task, the student will use the phone book and list the steps in making a long distance call.

26B.1 The HOUSEHOLD APPLIANCE MECHANIC must be able to sort shipments so that they may be put away in their proper place.

To accomplish this task, the student must be able to, given objects, sort by given classification criteria. The sorting should require a minimum of judgment. To oversimplify, sorting apples by types or tools by various generic classifications would be appropriate but sorting apples by quality or lumber by grades is a rating skill.

To demonstrate the ability to perform this task, the student will sort thirty address cards alphabetically by last name and then by city.

25-A

605

DEALER'S ORDER

No. 214969

25a.

SHIP TO Billy Budd
113 Bounty Road
Pequod, New York 11776

BILL TO Ahab & Son's Company
230 N. Merrimac Street
Norfolk, Virginia 18651

DEALER DATE	DEALER P.O. NO.	SALES REP. NO.	DEALER CODE	DISTRICT
	14456	3727.1	32	5

SHIP VIA	SHIP ON OR ABOUT
UPS	11/30/76

QUANTITY ORDERED	PART NUMBER	FOR MODEL NUMBER	PART NAME	UNIT PRICE	EXTENSION	
5	160646		Brushes	.50	2.50	
					$10.00	
					$10.60	

RETURN SECTION

QUANTITY	PART NUMBER	FOR MODEL NUMBER	PART NAME	TAG NUMBER	(*) CHECK: WARRANTY	REPAIR	SHIPPING ERROR

* IF WARRANTY - FURNISH USER'S NAME, ADDRESS, AND DATE OF PURCHASE WITH PART.

TERMS: 1% 10 DAYS OR 30 DAYS NET FROM DATE OF INVOICE, F.O.B. SHIPPING POINT.

28

SIGNED _____

25-B

Substitute Parts List with Prices and Illustrated Key

25-C

Substitute Table of Contents to Technical Manual

25-D

EMPLOYMENT APPLICATION

1. NAME (Last) (First) (Middle)

2. ADDRESS (Number, Street, City, Zip Code)

3. TELEPHONES
Home
Business

Length of Time at Current Address

Time at Previous Address

QUESTIONS 4 THROUGH 10 MUST BE ANSWERED *YES* OR *NO*

	YES	NO
4. Do you have a valid California Drivers License?		
5. Do you claim Veteran's Preference? If *Yes*, complete the following and submit copy of DD214 with application. (Veteran's Preference is applicable to entry level positions, only.) SERVICE DATES From _____ To _____ **NOTE:** To receive credit you must have served at least 30 days in the United States Armed Forces in time of war, or national emergency declared by the President of the United States of America, and have been discharged or released under conditions other than dishonorable.		
6. May we contact your present employer as to your qualifications, character and ability?		
7. Have you ever been dismissed from employment or resigned to avoid dismissal for misconduct or unsatisfactory service? (If *Yes*, give details in Question 11)		
8. Have you ever received Workmen's Compensation? (If *Yes*, describe in Question 11)		
9. Have you any disease, nervous disorder, physical disability or infirmity? (If *Yes*, describe in Question 11)		
10. Have you been hospitalized for any reason in the past five years? (If *Yes*, describe in Question 11)		

11 Explanations to questions 7 through 10 (Use additional sheets of paper, if necessary.)

12 EDUCATIONAL RECORD

Circle Highest Grade Completed
6 7 8 9 10 11 12

Name and Location of Last Elementary or High School

Graduated? Yes ☐ No ☐

Name and Location of College or University

Major

Credits or Degree

List any related business, trade, special training (give location and dates), estimated typing and shorthand speeds, San Mateo County typing and/or shorthand certificates (give certificate number and date), location of college placement file, and other related information as applicable.

13. EMPLOYMENT INFORMATION

(Begin with your present employment and work back. Account for all time during the past ten years, including periods of unemployment. In addition, please describe any other related work experience, including volunteer work. Use additional sheets if more space is required.)

Present or Last Position

Employer
Address
Supervisor's Name & Title Phone
Your Title
Duties

From mo. year
To mo. year
Total years months
Full Time ☐ Part Time ☐
Last Salary
Reason for leaving

Employer
Address
Supervisor's Name & Title Phone
Your Title
Duties

From mo. year
To mo. year
Total years months
Full Time ☐ Part Time ☐
Last Salary

14. PERSONAL REFERENCES GIVE THREE (Do not include previous employers or relatives.)

NAME	ADDRESS	PHONE NUMBER

6/09

25-E

SMALL APPLIANCE PARTS COMPANY
GENERAL OFFICES AND MAIN FACTORY

TELEPHONE 999-0432

Our Town, California

Dear

Thank you for your recent inquiry. The parts you need are:

PART #	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL

Plus tax

Plus Transportation,

Total Cost

Please attach a check to this letter for the total cost to avoid an additional fifty cent charge for C.O.D.

Sincerely,

Small Appliance Parts Company

T. T. Leakin
Branch Service Foreman

20.

610 25-F

WEEKLY SERVICE PLANNING SCHEDULE

NAME: _____ TITLE: Appliance Mechanic

SERVICE STATION: 4290 WEEK ENDING: _____

	WORK SCHEDULE	WORK PERFORMED: MODEL	MODEL	MODEL	MODEL	MODEL	MODEL	SUMMARY: TOTAL WORK COMPLETED
MONDAY	F.C. SERV. _____ PARTS SHIP. _____	48						F.C. SERV. _____ PARTS SHIP. 3
	HSWE. SERV. _____ CNTR. CUST. _____	168						HSWE. SERV. _____ CNTR. CUST. 4
	MAJOR APPL. _____ PHONE (CHECK) _____	410						MAJOR APPL. _____ PHONE NO. CALLS 6
	TRAINING PLANNED:	37						TIME USED: TNG. _____ OTHER 8
		TRAINING AND MISC. COMMENTS: Helped unload parts shipment						
TUESDAY	F.C. SERV. _____ PARTS SHIP. _____	27						F.C. SERV. _____ PARTS SHIP. 2
	HSWE. SERV. _____ CNTR. CUST. _____	13						HSWE. SERV. 1 CNTR. CUST. 1
	MAJOR APPL. _____ PHONE (CHECK) _____							MAJOR APPL. 1 PHONE NO. CALLS 3
	TRAINING PLANNED:							TIME USED: TNG. _____ OTHER 8
		TRAINING AND MISC. COMMENTS:						
WEDNESDAY	F.C. SERV. _____ PARTS SHIP. _____	310	41	311				F.C. SERV. _____ PARTS SHIP. 3
	HSWE. SERV. _____ CNTR. CUST. _____	48	41	410				HSWE. SERV. _____ CNTR. CUST. 12
	MAJOR APPL. _____ PHONE (CHECK) _____	37	39	168				MAJOR APPL. _____ PHONE NO. CALLS 1
	TRAINING PLANNED:	36	127	101				TIME USED: TNG. _____ OTHER 8
		TRAINING AND MISC. COMMENTS:						
THURSDAY	F.C. SERV. _____ PARTS SHIP. _____	317	37					F.C. SERV. 1 PARTS SHIP. 2
	HSWE. SERV. _____ CNTR. CUST. _____	27	81					HSWE. SERV. 1 CNTR. CUST. 8
	MAJOR APPL. _____ PHONE (CHECK) _____	37	86					MAJOR APPL. _____ PHONE NO. CALLS 8
	TRAINING PLANNED:	44	14					TIME USED: TNG. 2 OTHER 6
		TRAINING AND MISC. COMMENTS: worked with apprentice on wiring						
FRIDAY	F.C. SERV. _____ PARTS SHIP. _____							F.C. SERV. _____ PARTS SHIP. _____
	HSWE. SERV. _____ CNTR. CUST. _____							HSWE. SERV. _____ CNTR. CUST. _____
	MAJOR APPL. _____ PHONE (CHECK) _____							MAJOR APPL. _____ PHONE NO. CALLS _____
	TRAINING PLANNED:							TIME USED: TNG. _____ OTHER _____
		TRAINING AND MISC. COMMENTS:						
	F.C. SERV. _____ PARTS SHIP. _____	COMMENTS:						F.C. SERV. _____ PARTS SHIP. _____
	HSWE. SERV. _____ CNTR. CUST. _____							HSWE. SERV. _____ CNTR. CUST. 1
	MAJOR APPL. _____ PHONE (CHECK) _____							MAJOR APPL. _____ PHONE NO. CALLS _____

SUPERVISOR'S SIGNATURE _____ DATE _____ D.C.C./D.S.P. SIGNATURE _____ DATE _____

A.C.E. COMPETENCY BASED JOB DESCRIPTION 26

OCCUPATIONAL TITLE: LINEWORKER

COMPETENCY BASED JOB DESCRIPTION FACT SHEET

OCCUPATIONAL TITLE: Lineworker

D.O.T. CODE: 822.381 (4th Ed.: 822.381-014)

A.C.E. NUMBER: 26

CAREER LATTICE:

FIRST LEVEL: Lineworker

SECOND LEVEL: Foreman

THIRD LEVEL: Supervisor

D.O.T.'s General Educational Level: 4

SITE WHERE THE JOB CAN BE OBSERVED:

Pacific Telephone
2750 Marine Way
Palo Alto, CA

The Adult Competency Education Project
SAN MATEO COUNTY OFFICE OF EDUCATION
609 Price Ave., Redwood City, CA 94063
364-5600 Ext.

Number of Annual Jobs in San Mateo County: 12. This number is based upon the San Francisco-Oakland SMSA, U.S. Census Manpower projections and the quarterly employment security applicant record system reports on local San Mateo County Employment Development Department job opening activity.

Usual Entrance Requirements - Job application, written test on math and vocabulary, interview.

JOB DESCRIPTION (D.O.T.) - Installs and repairs telephone and telegraph lines, wires and cables, according to diagrams, and using electricians' handtools: Ascends poles or enters tunnels and sewers to cut in feeder lines, attach appliances, such as terminal boxes and repeaters, and repair or replace defective lines and auxiliary equipment. Unreels and strings lines from pole to pole and from pole to building. Installs hardware, such as conduits and insulators, and attaches appliances on lines. Pulls lines through ducts by hand or by use of winch. May dig holes for poles, set poles, and tamp them in place, using hand tamp. When assisting in installation and removal of plant equipment, such as callboxes and clocks, in city locations, is designated LINEWORKER, CITY. When patrolling telephone lines between communities is designated TOLL-LINE REPAIRPERSON.

THE ACADEMIC REQUIREMENTS FOR THE JOB OF

LINEWORKER

Below are listed first in general terms and then in specific competencies the math and communication activities which a person must typically be able to carry out to function successfully as a lineworker.

The right hand column lists the exact competencies found to have been essential to the job in our on-site employee interview. This column also notes the skills which are prerequisite to those competencies.

The center column* states the skill in more general language. The controlled language of this column permits comparison of skills between occupations.

* The items in the center column have been abstracted from an abbreviated version of the taxonomy of generic skills developed by Kawula, W. and Smith, A. De W., Generic Skills Handbook of Occupational Information, Training Research and Development Station, Prince Albert, Saskatchewan, 1975.

1A.1 Prerequisite to 12D.1 — Given a series of numbers in numeral form (e.g., 10, 20, 30) be able to copy series in hand-written form with 100% accuracy.

1A.2 Prerequisite to 12D.1 — Identify place value of digits in a given whole number with up to seven digits.

1A.3 Prerequisite to 3A.3 — Read a given whole number less than ten million and write its name in words.

1A.4 The LINEWORKER must be able to read and write code numbers found on telephone poles (and in the Lineman's handbook).

To accomplish this task, the student must be able to write a whole number less than ten million given the word name of the number.

To demonstrate the ability to perform this task, the student will write 1,764,339 accurately from an oral reading. Section 621-415-217 pg. 1.

1A.5 The LINEWORKER must be able to select and take inventory of the tools and equipment he needs on the truck.

To accomplish this task, the student must be able to count a set of objects and state or write the number of objects counted.

To demonstrate the ability to perform this task, the student will count the number of pencils and paper clips designated by the instructor and record them on a sheet of paper.

1B.1 Prerequisite to 1B.2 — Perform addition of whole numbers given instructions such as:

What is the total of 8 and 5?
8 plus 5 is ____;
Find the sum of 8 and 5;
Add 8 and 5;

$8 + 5 = ____$;

$$\begin{array}{r} 8 \\ +5 \\ \hline \end{array}$$

1B.2 The LINEWORKER must be able to keep track of the number of feet of cable he uses on a job when stringing cable from pole to pole.

To accomplish this task, the student must be able to find the sum of a set of whole numbers of 1-5 digits including cases where carrying is required.

To demonstrate the ability to perform addition of whole numbers by working out routine problems given by the instructor to a high degree of accuracy.

a.	b.	c.
150	1,433	232
+408	+ 727	+198

KEY: a. 558, b. 2,160, c. 430.

1B.3 Prerequisite to 1B.5 Perform subtraction of whole numbers given instructions such as:

8 minus 5 is ___;
Subtract 5 from 8;
Find the difference of 8 and 5:
8 - 5 = ___;

If you had 8 and gave away 5, you would have ___;

8
-5

1B.4 Prerequisite to 1B.5 Find the difference of two 1-5 digit numbers including cases where borrowing is required.

1B.5 The LINEWORKER must be able to determine how many feet of cable he used and the amount left so he can tell where he left off on the previous day.

To accomplish this task, the student must be able to solve routine word problems using subtraction and/or addition of whole numbers.

To demonstrate the ability to perform this task, the student will solve the following:

A lineworker used 32 ft. cable and marked where he left off. The next day he used 78 ft. To determine # of feet left on a 600 ft. reel, add footage from both days and subtract total from # of ft. on reel.

KEY: 110 ft. used; 490 ft. left.

1C.1 Prerequisite to 1C.5

Perform multiplication of whole numbers given instructions such as:

6 times 2 is ____;
Six two's are ____;
The product of 6 and 2 is ____;

$6 \times 2 = ____$;

$\begin{array}{r} 6 \\ \times 2 \\ \hline \end{array}$.

1C.2 Prerequisite to 1C.5

Find the product of a given pair of whole numbers of which one number is up to five digits and the other number up to three digits.

1C.3 Prerequisite to 1C.5

Perform division of two simple whole numbers (no remainder) given instructions such as:

6 divided by 2 is ____;
2 into 6 goes ____ times;
The quotient of 6 divided by 2 is ____;

$6 \div 2 = ____$;

$2\overline{)6} = ____$;

$\frac{6}{2} = ____$.

1C.4 Prerequisite to 1C.5

Find quotients of 1-5 digit dividends and 1-3 digit divisors including cases where there are remainders.

1C.5 The LINEWORKER must be able to figure the distance between two poles.

To accomplish this task, the student must be able to solve routine word problems using multiplication and/or division of whole numbers.

To demonstrate the ability to perform this task, the student will compute the following problems:

Pietro has to determine how much wire needs to be strung up to replace wires knocked down in a storm. If the distance between poles is 72 feet and he needs to restring wire between 18 poles, how many yards of wire are needed?

KEY: 408 yards.

1E.1 The LINEWORKER must be able to drive the company truck to work location and keep a record of gas mileage for reimbursement.

To accomplish this task, the student must be able to round off a number to nearest ten, hundred, thousand, ten thousand, or hundred thousand.

To demonstrate the ability to perform this task, the student will be given examples of distance, etc. and the instructor will ask them to be rounded off.

2A.1b The LINEWORKER must be able to use the proper sized nuts and bolts for stringing wires.

To accomplish this task, the student must be able to read fractions orally and explain that a fraction represents a given number of parts out of the total number of equal parts.

To demonstrate the ability to perform this task, the student will read aloud the following fractions and explain their meanings:

1/2 5/8 15/16 7/16 2/3

3A.1 Prerequisite to 3A.3 Read a given 1-4 place decimal fraction and write its name in words.

3A.2 Prerequisite to 3A.3 Write a 1-4 place decimal fraction given the word name of the number.

3A.3 The LINEWORKER must be able to read and write decimal fractions in order to record mileage while on the job.

To accomplish this task, the student must be able to arrange a set of decimal fractions in ascending or descending order.

To demonstrate the ability to perform this task, the student will write the following decimal numbers dictated by the instructor and then record them in descending order:

26,543.3	.333
26,480.7	.299
25,999.2	.1

6 and 2/10 mile = 6.2 mi.
Fourteen & 8/10 mi = 14.8 mi.

3B.1	Prerequisite to 3E.3	Calculate the sum of a set of decimal fractions.
3B.2	Prerequisite to 3E.4	Calculate the difference of two decimal fractions.
3C.1	Prerequisite to 3E.5	Calculate the product of two decimal fractions when rounding off is (a) required, and (b) not required.
3C.2	Prerequisite to 3E.5	State or write the product of a number and a power of ten between .001 and 1,000 without written calculation.

3E.3 The LINEWORKER must be able to make out a voucher for expenses on job assignments and supply requests.

To accomplish this task, the student must be able to add columns of dollars and cents values including amounts from $.01 to $9,999,99.

To demonstrate the ability to perform this task, the student will add a list of office supplies and calculate the total costs:

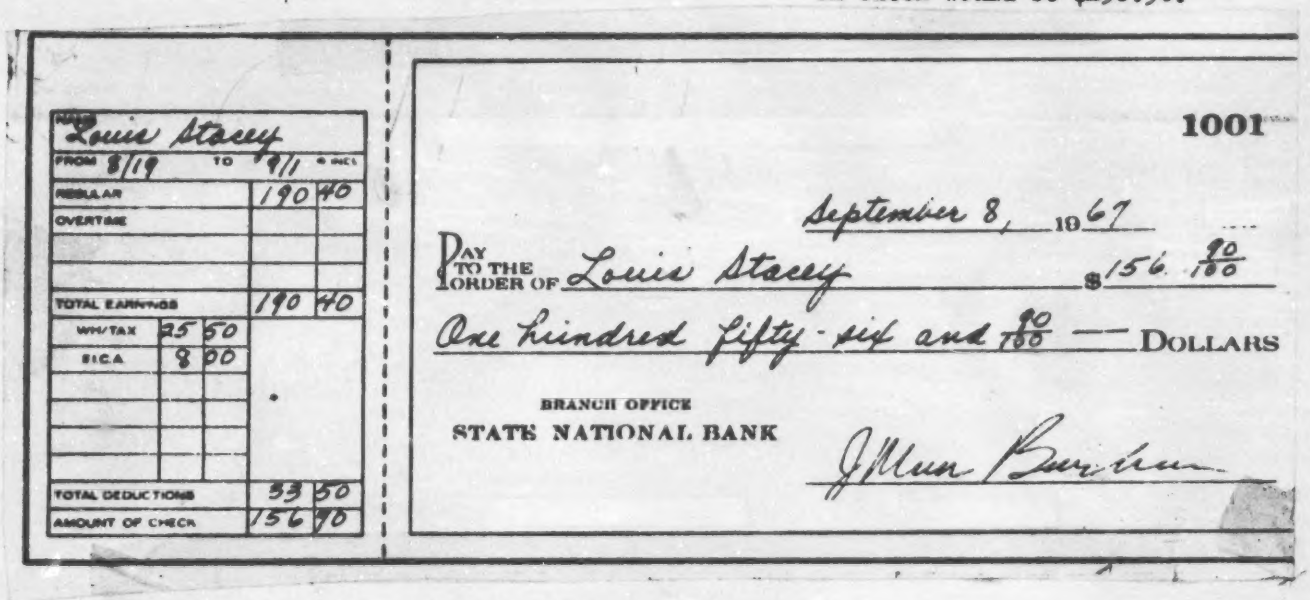
$4.00 worth of pencils
3.00 for rubber bands
15.50 for paper
3.75 for glue

KEY: $26.25

3E.4 The LINEWORKER must be able to check and determine that one's paycheck is accurate and that all the deductions are accurately calculated.

To accomplish this task, the student must be able to subtract one amount of money from another with values up to $10,000.00.

To demonstrate the ability to perform this task, the student will be given an example of a paycheck and determine that the total earnings are $190.40 with deductions of $25.50 for federal tax and $8.00 for F.I.C.A. The total amount of deductions would be $33.50 and the take home pay on check would be $156.90.



NAME Louis Stacey				
FROM 8/19		TO 9/1		# INCL
REGULAR			190	40
OVERTIME				
TOTAL EARNINGS			190	40
WH/TAX	25	50		
F.I.C.A.	8	00		
TOTAL DEDUCTIONS			33	50
AMOUNT OF CHECK			156	90

1001

September 8, 1967

PAY TO THE ORDER OF Louis Stacey $156 90/100

One hundred fifty-six and 90/100 — DOLLARS

BRANCH OFFICE
STATE NATIONAL BANK

J Allen Burton

3E.5 The LINEWORKER must be able to make out a voucher for mileage and expense for job assignments.

To accomplish this task, the student must be able to calculate the total cost of up to 25 items of equal value.

To demonstrate the ability to perform this task, the student will determine the overall cost for 2 rolls of cable @ $189.65 ea., 20 clamps @ .70¢ and 24 pole steps @ .50¢.

KEY: $379.30; $14.00; $12.00.

5B.8 Prerequisite to 5B.10 Solve a routine word problem using addition, subtraction, multiplication, and/or division of decimal fractions and common fractions or mixed numbers.

5B.10 The LINEWORKER must be able to compute amount of wire on a spool.

To accomplish this task, the student must be able to, given word problems appropriate to a selected occupation, select arithmetic functions to be performed; the order in which they are supposed to be done; and obtain the required solution.

To demonstrate the ability to perform this task, the student will determine the amount of wire left on a spool if it contains 330 feet of wire and a lineworker uses 3 lengths of wire (each 35 ft. 2 in. long).

KEY: 224½ feet.

6F.1 The LINEWORKER must be able to measure out the proper amount of wire when stringing new cables.

To accomplish this task, the student must be able to add and subtract units of distance including cases where borrowing is required.

To demonstrate the ability to perform this task, the student will perform the following additions:

a. 28 feet 11 inches
+37 feet 8 inches

b. 6 yards 7 inches
+3 yards +2 feet 9 inches

KEY: a. 66 feet 7 inches; b. 10 yards 4 inches.

6F.2 The LINEWORKER must be able to determine where to place clamps on wires.

To accomplish this task, the student must be able to measure a given distance or one dimension of an object with a ruler or tape measure correct to within one unit of the scale reading.

To demonstrate the ability to perform this task, the student will measure the dimensions of the table or desk he is now sitting at.

6F.3 The LINEWORKER must be able to estimate the amount of wire needed to replace worn or broken lines.

To accomplish this task, the student must be able to estimate the length, width, height, or distance between objects, to within 20% of actual measurement, in cases such as the following:

a. dimensions of a book, box, desk, room or building.
b. distances up to 200 yards.

To demonstrate the ability to perform this task, the student will estimate the dimensions of the room occupied (to be verified by the student measuring the dimensions).

6G.1 The LINEWORKER must be able to fill out a time card.

To accomplish this task, the student must be able to subtract 12-hour clock times including cases where borrowing is required.

To demonstrate the ability to perform this task, the student will determine the number of hours worked in each case below:

	Starting time	Quitting time
a.	3:00 P.M.	11:00 P.M.
b.	8:45 A.M.	5:20 P.M.

KEY: a. 8 hours; b. 8 hours and 35 minutes.

8A.3 Prerequisite to 8A.5 Identify a series of consecutive whole numbers or multiples of whole numbers with or without equal subdivisions between numbers on a measuring device, as a graduated scale.

8A.4 Prerequisite to 8A.5 Write the size of the interval between:

a. numerals on a graduated scale.
b. subdivisions on a graduated scale.

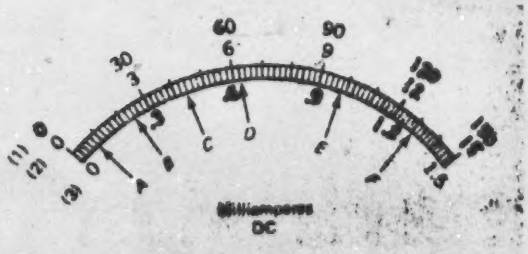
8A.5 The LINEWORKER must be able to use voltage testers, ammeters, and other measuring devices.

To accomplish this task, the student must be able to write the measurement indicated on a sketch of a graduated scale:

a. to the nearest whole number when the scale is marked off in consecutive whole numbers with or without subdivisions.
b. to a given precision when the scale is marked off in multiples of a whole number with or without subdivisions.
c. to a given precision when the scale is marked off in whole numbers with or without subdivisions representing fractions such as halves, quarters, eighths, sixteenths, tenths, or fifths.
d. to a given precision when the scale is marked off in whole numbers which represent multiples of a given number such as 100 or 1000.

To demonstrate the ability to perform this task, the student will write the readings indicated below in the spaces provided.

	(1)	(2)	(3)
A			
B			
C			
D			
E			
F			



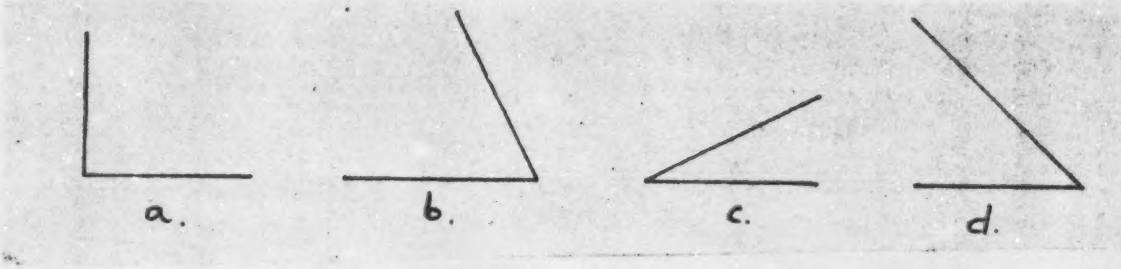
11A.1 Prerequisite to 12D.1

Identify rectangles, squares, triangles, circles, rectangular solids, cubes, pyramids, cones, cylinders, and spheres from a set of objects, pictures of objects, or names of objects.

11B.1 The LINEWORKER must be able to assemble parts correctly using diagrams.

To accomplish this task, the student must be able to identify 30°, 45°, 60° and 90° angles from a set of such angles, without the aid of a protractor.

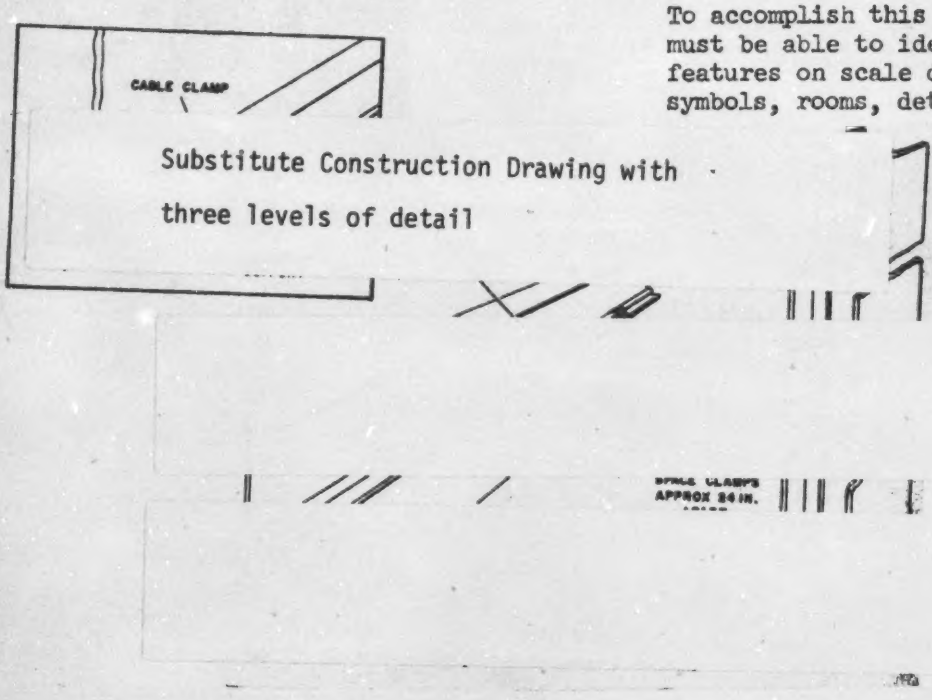
To demonstrate the ability to perform this task, the student will identify each of the angles below:



KEY: a. 90° ; b. 60° ; c. 30° ; d. 45°.

12A.4 The LINEWORKER must be able to do minor construction work.

To accomplish this task, the student must be able to identify various features on scale drawings such as symbols, rooms, detail drawings.



To demonstrate the ability to perform this task, the student will examine the drawing on the left and explain what each of the three parts represents.

12D.1 The LINEWORKER must be able to assemble equipment for installation.

To accomplish this task, the student must be able to identify the order in which parts are put together in an assembly drawing.

To demonstrate the ability to perform this task, the student will examine the drawing below and state the order of assembly:

Substitute Assembly Drawing

13A.1	Prerequisite to 15A.3	Given letters of the alphabet in manuscript form and in random order, read each letter and pronounce each letter correctly.
13A.2	Prerequisite to 12D.1	Given the letters of the alphabet in manuscript form and in random order, read each letter correctly in the proper alphabetical order.
15A.1	Prerequisite to 15A.3	Read a list of 50 words from a series of commonly used terms (e.g., from the Dolch List).
15A.2	Prerequisite to 15A.3	Read words from the labels of frequently-used products or of products used in a given occupation.

15A.3 The LINEWORKER must be able to converse with co-workers and supervisors.

To accomplish this task, the student must be able to read and use in an oral sentence words from a list of words common to the vocabulary of a given occupation.

To demonstrate the ability to perform this task, the student will read aloud each word on the left and match it with the proper definition on the right:

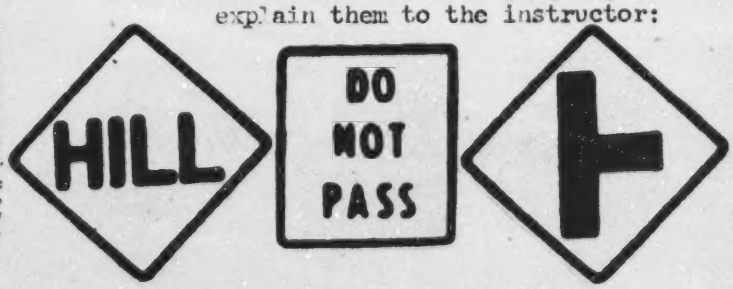
A. dangerous	1. a cylindrical device which has a rim or ridge at each end and an axial hole for a spindle on which a wire is wound
B. insulator	2. to restore by replacing a part or putting together what is torn or broken
C. spool	3. a photographic print in white on a bright blue background
D. cable	4. an assembly of electrical conductors insulated from each other but laid up together by being twisted around a central core.
E. gear	5. able or likely to inflict injury
F. conduit	6. a long, slender, usually cylindrical, object
G. repair	7. a belt fastening a person to an object to prevent falling or injury
H. blueprint	8. equipment, paraphernalia
I. pole	9. the distance from the bottom to top of something
J. safety belt	10. an administrative officer
K. supervisor	11. a pipe, tube, or tile for protecting electric wires or cables
L. height	12. a device that is a poor conductor of electricity used to prevent undesired flow of electricity.

KEY: A-5, B-12, C-1, D-4, E-8, F-11, G-2, H-3, I-6, J-7, K-10, L-9.

15B.1 The LINEWORKER must be able to work safely.

To accomplish this task, the student must be able to read aloud and explain a series of common functional signs (e.g., safety signs, road signs, etc.).

To demonstrate the ability to perform this task, the student will read aloud the following signs and explain them to the instructor:



16A.1 Prerequisite to 16A.4 Identify a form as a standardized printed document with blank spaces for recording certain needed information.

16A.2 Prerequisite to 16A.4 Interpret terminology and abbreviations frequently found in forms.

16A.3 Prerequisite to 16A.4 Identify various kinds of forms by stating the kind of information to be recorded.

16A.4 The LINEWORKER must be able to fulfill work orders and check over purchase orders.

To accomplish this task, the student must be able to, given a variety of common business forms such as work orders, job orders, issue and receipt vouchers, claims and purchase orders, answer factual questions based on the data on the forms.

To demonstrate the ability to perform this task, the student will examine exhibit 26-A and determine the following information:

a. the date of the order;
b. the quantity of strandvises;
c. the cost per unit;
d. the invoice number.

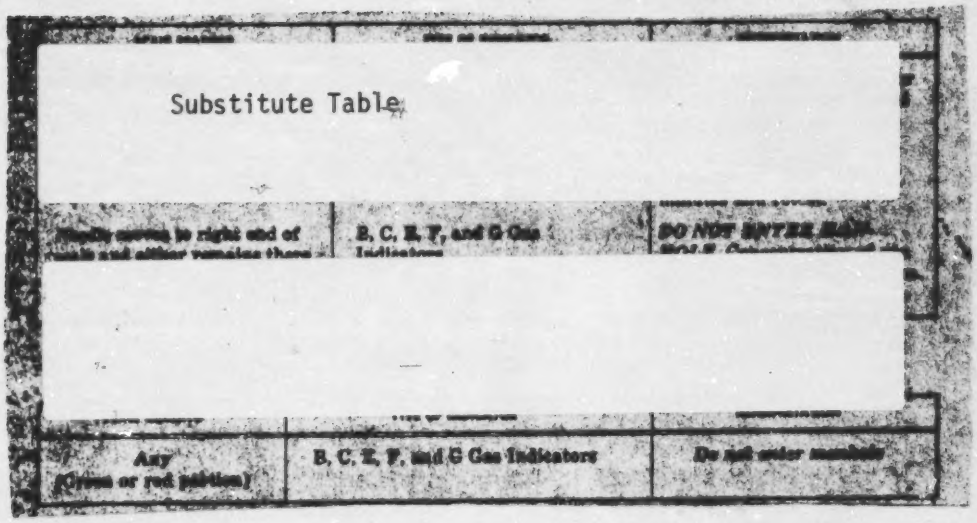
16B.1 Prerequisite to 16B.3 Describe the uses of charts and tables and define them as a visual way to give information in a compact and organized form.

16B.2 Prerequisite to 16B.3 State the type of information recorded on given charts or tables.

16B.3 The LINEWORKER must be able to work safely.

To accomplish this task, the student must be able to, given common reference tables and charts such as organization charts, parts charts, reference tables, including charts and tables designed in matrix form (rows and columns), answer factual questions based on the data supplied.

To demonstrate the ability to perform this task, the student will examine the tables below and determine the dangerous color codes (and numerical ranges, if any) for the B, C, and F Gas Indicators.



Substitute Table

	B, C, E, F, and G Gas Indications	DO NOT ENTER MAIN
Any (Green or red position)	B, C, E, F, and G Gas Indicators	Do not enter manhole

16D.1 Prerequisite to 16D.5 Identify a manual as a handbook of instructions and/or information related to one topic, and give an example of a manual.

16D.2 Prerequisite to 16D.5 Identify the particular kind of information or directions included in a given manual, using the title, table of contents, and/or index as guide.

16D.3 Prerequisite to 16D.5 Identify the parts of a given manual which apply to a given situation using the table of contents and/or index as guide.

16D.5 The LINEWORKER must be able to learn while working on the job.

To accomplish this task, the student must be able to apply instructions or information from a given manual to a particular situation given an oral description of a problem that can be solved using information from the manual.

To demonstrate the ability to perform this task, the student will read the excerpts below and then explain what steps should be taken when a broken pole is discovered:

7.01 Poles found by the previously described tests to be unsafe for climbing should be marked immediately with a B or C Pole Tag, as described in Part 8. The unsafe condition should be reported promptly to your supervisor.

7.02 If the pole has been broken, resulting in an unsafe condition and requiring immediate support, temporary supports should, if practicable, be applied immediately to prevent the pole from falling. If suitable bracing means are not available, steps should be taken to warn passers-by or traffic away from the location until a safe condition can be restored and a report of the condition should be made promptly to your supervisor.

17A.7 Prerequisite to 19A.15 Do an exercise that requires recall of given instructions or information.

17A.13 Prerequisite to 19A.15 Given a set of written instructions involving activities to be performed by a number of people, and the particular roles, prepare a list and sequence of activities to be performed.

19A.15 The LINEWORKER must be able to work under direct supervision.

To accomplish this task, the student must be able to perform a series of two or three activities which require recall or oral instructions. (The activities to be within the abilities of the student - recall is the item to be demonstrated.)

To demonstrate the ability to perform this task, the student will listen to the following oral instructions and then perform them:

a. turn to 26-A;
b. change the quantity to 400;
c. find the new total using 6% sales tax.

21A.3 Prerequisite to 22B.2 Given a date (day, month, date, year) write the date using correct punctuation and capitalization.

21A.4 Prerequisite to 21A.5 Given a standard clock, tell correct time to within 5 minutes of actual time.

21A.5 The LINEWORKER must be able to fill out time cards.

To accomplish this task, the student must be able to, given times of the day, be able to write time:
a. 8:00, b. eight o'clock, c. 8 o'clock.

To demonstrate the ability to perform this task, the student will examine the clocks below and write the times indicated:

22A.1 Prerequisite to 22B.2 — Given simple data in the form of words and figures, write phrases on forms which are legible and which convey the desired information.

22B.1 Prerequisite to 22B.2 — Given simple data in the form of words and figures, write complete sentences on forms which are legible and which convey the required information.

22B.2 The LINEWORKER must be able to apply for a job.

To accomplish this task, the student must be able to complete a sample application form for employment in a legible manner.

To demonstrate the ability to perform this task, the student will fill out exhibit 26-B accurately and neatly.

22B.6 The LINEWORKER must be able to drive a truck or van.

To accomplish this task, the student must be able to complete other forms used locally to make applications for driver's license, automobile registration, electric service, telephone service, etc.

To demonstrate the ability to perform this task, the student will fill out exhibit 26-C.

26B.1 The LINEWORKER must be able to sort tools as well as various fasteners and equipment.

To accomplish this task, the student must be able to, given objects, sort by given classification criteria. The sorting should require a minimum of judgment. To oversimplify, sorting apples by types or tools by various generic classifications would be appropriate but sorting apples by quality or lumber by grades is a rating skill.

To demonstrate the ability to perform this task, the student will arrange a set of pencils and pens according to their exterior colors.

630

26-A

DATE 12/31/81

YOUR ORDER NO. 107444

REDWOOD CITY, CALIFORNIA
94063

TERMS: NET CASH

SOLD TO: Rene Cassin
Franco Telephone Corp.
Baton Rouge, La.
58746

SHIP TO: Linus C. Pauling
General Construction
1875 Stanford Ave.
Baton Rouge, La.
58746

QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT
350	50	Strandvises (7/16" for 16M galvanized strand)	$25	$175
			Tax	10.50
			TOTAL	$185.50

PLEASE PAY THIS AMOUNT
NO STATEMENT WILL BE RENDERED

26-A

INVOICE

CREDIT TO: Dag Hammarskjöld, Treasurer

53

25992

26-B

EMPLOYMENT APPLICATION

1. NAME (Last) (First) (Middle)

2. ADDRESS (Number, Street, City, Zip Code) | 3. TELEPHONES Home ____ Business ____

Length of Time at Current Address | Time at Previous Address

QUESTIONS 4 THROUGH 10 MUST BE ANSWERED *YES* OR *NO*

	YES	NO
4. Do you have a valid California Drivers License?		
5. Do you claim Veteran's Preference? If *Yes*, complete the following and submit copy of DD214 with application. (Veteran's Preference is applicable to entry level positions, only.) SERVICE DATES From ____ To ____ **NOTE:** To receive credit you must have served at least 30 days in the United States Armed Forces in time of war, or national emergency declared by the President of the United States of America, and have been discharged or released under conditions other than dishonorable.		
6. May we contact your present employer as to your qualifications, character and ability?		
7. Have you ever been dismissed from employment or resigned to avoid dismissal for misconduct or unsatisfactory service? (If *Yes*, give details in Question 11)		
8. Have you ever received Workman's Compensation? (If *Yes*, describe in Question 11)		
9. Have you any disease, nervous disorder, physical disability or infirmity? (If *Yes*, describe in Question 11)		
10. Have you been hospitalized for any reason in the past five years? (If *Yes*, describe in Question 11)		

11 Explanations to questions 7 through 10 (Use additional sheets of paper, if necessary.)

12 **EDUCATIONAL RECORD**

Circle Highest Grade Completed 8 7 8 9 10 11 12 | Name and Location of Last Elementary or High School | Graduated? Yes ☐ No ☐

Name and Location of College or University | Major | Credits or Degree

List any related business, trade, special training (give location and dates); estimated typing and shorthand speeds; San Mateo County typing and/or shorthand certificates (give certificate number and date); location of college placement file; and other related information as applicable.

13. **EMPLOYMENT INFORMATION** (Begin with your present employment and work back. Account for all time during the past ten years, including periods of unemployment. In addition, please describe any other related work experience, including volunteer work. Use additional sheets if more space is required.)

Present or Last Position

Employer ____ From ____ mo. year

Address ____ To ____ mo. year

Supervisor's Name & Title ____ Phone ____ Total ____ years months

Your Title ____ Full Time ☐ Part Time ☐

Duties ____ Last Salary ____

Reason for leaving ____

Employer ____ From ____ mo. year

Address ____ To ____ mo. year

Supervisor's Name & Title ____ Phone ____ Total ____ years months

Your Title ____ Full Time ☐ Part Time ☐

Duties ____ Last Salary ____

14. **PERSONAL REFERENCES - GIVE THREE** (Do not include previous employers or relatives.)

NAME	ADDRESS	PHONE NUMBER

26-C

Application for Operator's License

LICENSE NO.

Previous Ohio Driver License No.....

Check Which ☐ RENEWAL ☐ FIRST

(1) Name..... (printed in full) First Middle Last

(2) Residence Address.....P. O.....(.....), Ohio Zone No.

(3) County..... (4) Deputy Registrar.....
Town.....
Agency No.....

(5)

Age	Date of Birth Mo.	Da.	Yr.	Sex	Weight	Height	Color Hair	Color Eyes	Complexion

(6) Business Address.....P. O.....(.....), Ohio Zone No.

(7) Applicant's Occupation..... Place of Birth.....

(8) All convictions and bond forfeitures (state which) in court of record for violations of motor vehicle laws (except parking) within past two years.

Date City and Court Charge

.....

.....

.....

INDICATE BY CHECK MARK IN BOX ANSWER THAT APPLIES.

	Yes	No
(9) Are You Now Under Suspension or Revocation of Your Driving Rights?.....	☐	☐
(10) Do you now have any physical defects, mental disability or disease?.....	☐	☐

If so, give nature and extent and name of attending physician.....

.....

(11) Have you ever been, or are you now afflicted with epilepsy, subject to convulsions, fainting spells, or loss of muscular control?.....	☐	☐
(12) Are you an habitual drunkard or addicted to the use of narcotic drugs?.....	☐	☐

Applicant giving false information is subject to prosecution. (Sec. 4507.36, R. C.)

(13) X _____
Signature of Applicant

(14) Date.....

(15) Application of any person under 18 years of age must also be signed by either parent, guardian or other person having custody, or when neither exists, by a responsible person. Such signer is jointly liable for negligence or wilful misconduct of licensee.

_____ _____
Signature Relationship

_____ _____
Date Address

A.C.E. COMPETENCY BASED JOB DESCRIPTION 27

OCCUPATIONAL TITLE: PAINTER HELPER, SPRAY

FACT SHEET

COMPETENCY BASED JOB DESCRIPTION FACT SHEET

OCCUPATIONAL TITLE: Painter Helper, Spray

DOT CODE: 741.887

ACE NUMBER: 27

CAREER LADDER

FIRST LEVEL:

Painter Helper, Spray

SECOND LEVEL:

Painter I

THIRD LEVEL:

Head Painter
Manager

GED LEVEL: 2

The activity which is the subject of this report was supported in whole or in part by the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

JOB SITE WHERE THE JOB CAN BE OBSERVED:

Harris Enameling
2740 Bay Rd.
Redwood City, Ca. 94063

These materials were developed pursuant to a grant from HEW.OE under PL93-380, Section 309. This does not necessarily imply endorsement of the content.

Number of Annual Jobs in San Mateo County, 75. This number is based upon the San Francisco-Oakland SMSA U.S. Census Manpower projections and the quarterly employment security application record system reports on local San Mateo County Employment Development job opening activity.

JOB DESCRIPTION (DOT): Assists PAINTER, SPRAY I to spray-paint surfaces of materials or products, performing any combination of the following tasks: Moves materials to work area, using handtruck or dolly. Fills containers with prescribed quantities of paint and thinner. Applies masking to articles, (MASKER). Installs specified nozzles in spray guns. Replaces screens and filters. Cleans and prepares surface of articles to be painted, using solvent, sandpaper, wire brush, and scraper. Cleans spray and drying chamber, conveyor tanks, hoses and nozzles, using solvent, brushes and cloths. Racks workpieces on conveyor; inspects, marks and transfers finished pieces to stockroom or shipping areas. Positions articles in jigs or erects ladders and scaffolds. Performs other duties as indicated. May be known according to task performed as CLEAN-UP MAN. Other titles might include; PAINT-SPRAYING-MACHINE-OPERATOR, SPRAYER HELPER.

THE ACADEMIC REQUIREMENTS FOR THE JOB OF PAINTER HELPER, SPRAY

Below are listed first in general terms and then in specific competencies the math and communication activities which a person must typically be able to carry out to function successfully as a painter helper.

The right hand column lists the exact competencies found to have been essential to the job in our on-site employee interview. This column also notes the skills which are prerequisite to those competencies.

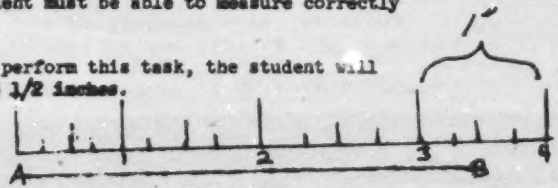
The left hand column* states the skill in more general language. The controlled language of this column permits comparison of skills between occupations.

*The items in the left hand column have been abstracted from an abbreviated version of the taxonomy of generic skills developed by Kawula, W., and Smith, A De W., Generic Skills Handbook of Occupational Information, Training Research and Development Station, Prince Albert, Saskatchewan, 1975.

The Adult Competency Education Project
SAN MATEO COUNTY OFFICE OF EDUCATION
609 Price Ave., Redwood City, CA 94063
364-5600 Ext.

633

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
1A.3 Read a given whole number less than 10 million and write its name in words.	See 1A.6
1A.4 Write a whole number less than 10 million given the word name of the number.	A painter labels cans on which paint has covered the original label. To accomplish this task, the student must be able to write whole numbers given the word name of the number. To demonstrate the ability to perform this task, the student will write the numeral for ninety-eight as 98.
1C.1 Perform multiplication of whole numbers given instructions such as: 6 times 2 is ____. Three two's are _____. The product of 6 and 2 is _____. $6 \times 2 =$ ____. $\begin{array}{r} 6 \\ \times\ 2 \end{array}$	See 5C.2
1C.3 Perform division of two simple whole numbers (no remainder) given instructions such as: 2 divided by 6 is ____. 2 into 6 goes ___ times. The quotient of 6 divided by 2 is ____? $6 \div 2 =$ ____. $2)\overline{6} =$ _____. $\frac{6}{2} =$	A painter allocates paint to each room when he has several rooms to paint. To accomplish this task, the student must be able to perform division of two simple whole numbers. To demonstrate the ability to perform this task, the student will determine that if he has 12 gallons of paint and 6 rooms of equal size to paint he will use 2 gallons on each room. ($12 \div 6 = 2$).
1D.1 Use addition, subtraction, multiplication or division, as appropriate, in the solution of problems involving a combination of two or more functions with whole numbers.	See 1C.3
3A.3 Arrange a set of decimal fractions in ascending or descending order.	A painter must be able to select the proper spray nozzle for a certain job. Spray nozzles are rated in decimal sizes. To accomplish this task, the student must be able to read and recognize the relative values of decimals. To demonstrate the ability to perform this task, the student will, given in random order, arrange the following in this descending order. .7, .4, .16, .1, .016

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
5C.2 State or write in simplest form (lowest terms) a ratio of two numbers or items in the form: a. a:b, b. $\frac{a}{b}$	A painter mixes paint and thinner in the designated ratio found on the paint can. To accomplish this task, the student must be able to write a ratio in simplest form. To demonstrate the ability to perform this task, the student will determine that if the ratio of thinner to paint is one to five it is written 1:5 or 1/5.
6C.4 Convert volume of liquid measure into an equivalent of original measure used.	A painter must be able to mix colors for quarts as well as gallons. To accomplish this task, the student must be able to convert volume into their equivalents. To demonstrate the ability to perform this task, the student will determine that 1 1/2 gallons = 6 quarts.
6F.2 Measure a given distance or one dimension of an object with a ruler or tape measure correct within one unit of the scale reading.	A painter finds the dimensions of areas he is going to paint. To accomplish this task, the student must be able to measure correctly with a ruler. To demonstrate the ability to perform this task, the student will determine that line A - B is 3 1/2 inches. 
8A.6 Write the measurement indicated on a sketch of a combination of scales which may be circular and read in either a clockwise or counterclockwise direction, such as on a gas or electric meter.	A painter must be able to adjust air pressure using valve on the spray gun compressor. To accomplish this task, the student must be able to read pressure gauges. To demonstrate the ability to perform this task, the student will refer to the measurement devices on 27A and determine the readings on each to be: Speedometer 0, Ruler 2 1/8 in., Scale 5 lbs., Thermometer 55°.
12A.1 Identify 1:4, 6:1, 1" to the foot, 1" = 5 mi., 1:50,000, etc., as examples of scales used to represent reductions or expansions of the actual size of an object.	See 12A.3
12A.2 Convert a scale measurement to true size given the scale.	See 12A.3

INSTRUCTIONAL OBJECTIVES

12A.3 Identify a given drawing as a map, blue print, photograph, schematic diagram or assembly (exploded view) drawing.

13A.2 Given the letters of the alphabet in manuscript form and in random order, read each letter correctly in the proper alphabetical order.

15A.2 Read words from the labels of frequently used products or of products used in a given occupation.

15A.3 Read and use in an oral sentence words from a list of words common to the vocabulary of a given occupation.

JOB COMPETENCIES

A painter learns from machine diagrams what colors to paint certain parts of the machine. To accomplish this task, the student must be able to read assembly drawings.

To demonstrate ability to perform this task, the student will identify the two tuning shafts - 27-C.

A painter must keep a billing record of this customer in alphabetical order. To accomplish this task, the student must be able to arrange and read letters of the alphabet in proper order.

To demonstrate the ability to perform this task, the student will read A, Z, F, O, M, Q, H, as: A, F, H, M, O, Q, Z.

See 15A.3

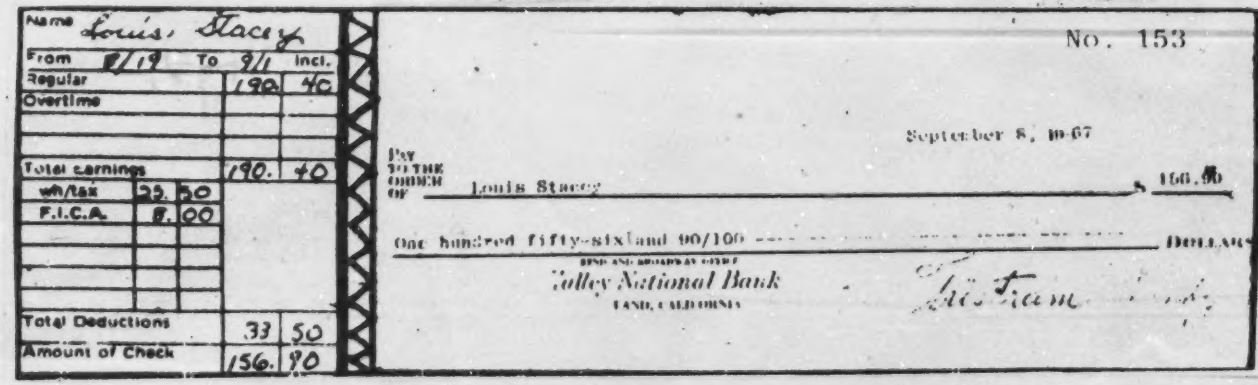
A painter must be able to converse with coworkers and customers. To accomplish this task the stdent must be able to read and use in an oral sentence the vocabulary common to the occupation.

To demonstrate the ability to perform this task, the student will match the following with 90% accuracy.

A. nozzle	1. a temporary or movable platform for workmen.
B. turpentine	2. a layer of paint spread over any service
C. filter	3. a platform on a roller or on wheels or casters for transporting heavy objects.
D. scaffold	
E. semi-gloss	4. a volatile liquid (as turpentine) used especially to thin paint.
F. latex	
G. coating	5. any of various, durable natural varnishes.
H. scrape	6. to cover for protection.
I. solvent	7. a small spout
J. mask	8. a liquid substance capable of dissolving or disbursing one or more other substances.
K. thinner	
L. lacquer	9. to remove matter from a surface by repeated strokes.
M. dolly	10. a water emulsion of a synthetic rubber.
	11. having a low luster.
	12. a porous article through which a liquid is passed to separate out matter in suspension.
	13. an essential oil used especially as a solvent and thinner.

KEY: A-7, B-13, C-12, D-1, E-11, F-10, G-2, H-9, I-8, J-6, K-4, L-5, M-3.

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
16A.1 Identify a form as a standardized printed document with blank spaces for recording certain needed information.	See 16A.4
15A.4 Given a variety of common business forms such as work orders, job orders, issue and receipt vouchers, claims and purchase orders, answer factual questions based on data on the forms.	A painter must be able to read paychecks he receives in order to determine his financial standing. To accomplish this task, the student must be able to read and obtain information from common business forms. To demonstrate the ability to perform this task, the student will refer to the check below and determine from the stub that Louis Stacey received gross pay of $190.40, that deductions were $25.50 for withholdings and $8.00 for F.I.C.A., and that the net pay was $156.90.



Name Louis Stacey
From 8/19 To 9/1 Incl.

Regular		190.	40
Overtime			
Total earnings		190.	40
wh/tax	25.	50	
F.I.C.A.	8.	00	
Total Deductions		33	50
Amount of Check		156.	90

No. 153

September 8, 1967

Pay TO THE ORDER OF Louis Stacey $ 156.90

One hundred fifty-six and 90/100 ---- DOLLARS

Valley National Bank

16D.2 Identify the particular kind of information or directions included in a given manual, using the title, table of contents, and/or index as guide.	A painter must be able to use reference manuals in the solution of unfamiliar problems such as deciding proper nozzle size, air pressure, paint thickness. To accomplish this task, the student must be able to use title, table of contents, and/or index as guides. To demonstrate the ability to perform this task, the student will determine that the index on Appendix 27-C refers to a telephone directory.
22B.2 Complete a job application form.	A painter fills in a job application before he is hired. To accomplish this task, the student must be able to complete a sample application form for employment in a legible manner. To demonstrate the ability to perform this task, the student will refer to Appendix 27-D and complete the form in an accurate and legible manner.

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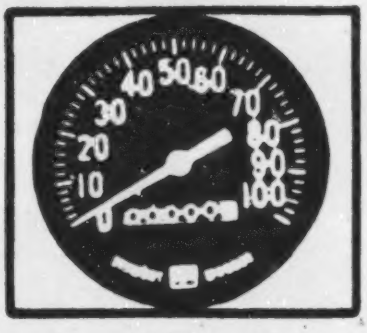
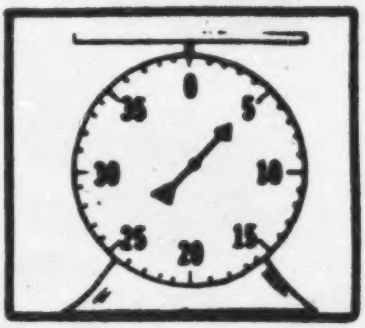
TOOLS FOR MEASUREMENT

27-A

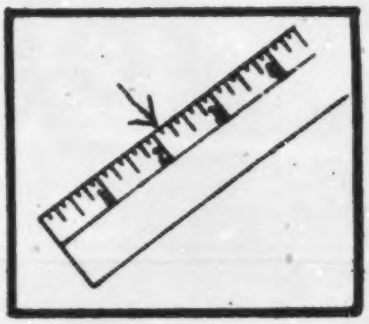


SPEEDOMETER



SCALE

THERMOMETER



RULER

27-B

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27-C

Substitute Assembly Drawing with Printed Labels for Parts

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27-D

EMPLOYMENT APPLICATION

1. NAME (Last) (First) (Middle)

2. ADDRESS (Number, Street, City, Zip Code) 3. TELEPHONES

Home

Business

Length of Time at Current Address | Time at Previous Address

QUESTIONS 4 THROUGH 10 MUST BE ANSWERED *YES* OR *NO*

	YES	NO
4. Do you have a valid California Drivers License?		
5. Do you claim Veteran's Preference? If *Yes*, complete the following and submit copy of DD214 with application. (Veteran's Preference is applicable to entry level positions, only.) SERVICE DATES From _____ To _____ NOTE: To receive credit you must have served at least 30 days in the United States Armed Forces in time of war, or national emergency declared by the President of the United States of America, and have been discharged or released under conditions other than dishonorable.		
6. May we contact your present employer as to your qualifications, character and ability?		
7. Have you ever been dismissed from employment or resigned to avoid dismissal for misconduct or unsatisfactory service? (If *Yes*, give details in Question 11)		
8. Have you ever received Workmen's Compensation? (If *Yes*, describe in Question 11)		
9. Have you any disease, nervous disorder, physical disability or infirmity? (If *Yes*, describe in Question 11)		
10. Have you been hospitalized for any reason in the past five years? (If *Yes*, describe in Question 11)		

11 Explanations to questions 7 through 10 (Use additional sheets of paper, if necessary.)

12 EDUCATIONAL RECORD

Circle Highest Grade Completed: 6 7 8 9 10 11 12 | Name and Location of Last Elementary or High School | Graduated? Yes ☐ No ☐

Name and Location of College or University | Major | Credits or Degree

List any related business, trade, special training (give location and dates); estimated typing and shorthand speeds; San Mateo County typing and/or shorthand certificates (give certificate number and date); location of college placement file; and other related information as applicable.

13. EMPLOYMENT INFORMATION

(Begin with your present employment and work back. Account for all time during the past ten years, including periods of unemployment. In addition, please describe any other related work experience, including volunteer work. Use additional sheets if more space is required.)

Present or Last Position

Employer

Address

Supervisor's Name & Title Phone

Your Title

Duties

From ___ mo. ___ year

To ___ mo. ___ year

Total ___ years ___ months

Full Time ☐ Part Time ☐

Last Salary

Reason for leaving

Employer

Address

Supervisor's Name & Title Phone

Your Title

Duties

From ___ mo. ___ year

To ___ mo. ___ year

Total ___ years ___ months

Full Time ☐ Part Time ☐

Last Salary

14. PERSONAL REFERENCES - GIVE THREE (Do not include previous employers or relatives.)

NAME	ADDRESS	PHONE NUMBER

A.C.E. COMPETENCY BASED JOB DESCRIPTION 28

OCCUPATIONAL TITLE: PAINTER, BRUSH

D.O.T. CODE: 740.884
(4th Ed.: 740.684-022)

ACE Number: 28

FACT SHEET

CAREER LADDER:

FIRST LEVEL:
Brush Painter

SECOND LEVEL:
Foreman

THIRD LEVEL:
Business Owner

GED LEVEL: 2

Site where the job can be observed:
Vernon Carmichael
188 Old County Road
Belmont, CA

Number of Annual Jobs in San Mateo County: 88 This number is based upon the San Francisco-Oakland SMSA, U.S. Census Manpower projections and the quarterly employment security application record system reports on local San Mateo County Employment Development Department job opening activity.

Job Prerequisites: Skills are demonstrated on the job at entry level.

D.O.T. JOB DESCRIPTION: Brushes paint, lacquer, rustproofing agent, or other coating onto metal or woodstock or fabricated items, using brush: Places workpiece on bench, stanchion, or floor. Cleans surfaces, using hand scraper, wire brush or sandpaper. Pours desired amount of thinner into paint. Paints articles, using brush. Cleans brushes and floor, using solvent or soap and water. May paint stock or part numbers onto workpiece, freehand or by use of stencil. May transfer items to and from work area, using hoist or handtruck.

THE ACADEMIC REQUIREMENTS FOR THE JOB OF
BRUSH PAINTER

Below are listed, first in general terms and then in specific competencies, the math and communication activities which a person must typically be able to carry out to function successfully as a brush painter.

The right hand column lists the exact competencies found to have been essential to the job in our on-site employee interview. This column also notes the skills which are prerequisite to those competencies.

The left hand column states the skill in more general language. The controlled language of this column permits comparison of skills between occupations.

The items in the left hand column have been abstracted from an abbreviated version of the taxonomy of generic skills developed by Kawula, W., and Smith, A. De W., **Generic Skills Handbook of Occupational Information,** Training Research and Development Station, Prince Albert, Saskatchewan, 1975.

These materials were developed pursuant to a grant from HEW, OE under PL93-380, Section 309. This does not necessarily imply endorsement of the content.

INSTRUCTIONAL OBJECTIVES	JOB COMPENTENCIES
1A.1 Given a series of numbers in numeral form (e.g., 10,20,30), be able to copy series in hand-written form with 100% accuracy.	See 1A.3
1A.3 Read a given whole number less than 10 million and write its name in words.	A brush painter must be able to read house numbers in order to locate addresses. To accomplish this task, the student must read whole numbers. **To demonstrate the ability to perform this task, the student will read the following whole numbers:** **1,** **45,** **198,** **2073,** **40-743.**
1A.4 Write a whole number less than 10 million given the word name of the number.	See 1A.5
1A.5 Count a set of up to 100 objects and state or write the number of objects counted.	A brush painter must be able to count cans of paint, equipment, or rooms. To accomplish this task, the student must be able to count whole numbers. **To demonstrate the ability to perform this task, the student will determine how many rooms are in the ACE project office and record the number.**
1C.1 Perform multiplication of whole numbers given instructions such as 6 times 2 is_____or 6 x 2 =_____.	See 6A.3
5C.1 Identify comparisons of two numbers in forms such as a:b, "a is to b," or "a parts to b parts," as ratios.	A brush painter must be able to thin paint and mix paints. To accomplish this task, the student must be able to identify a ratio. **To demonstrate the ability to perform this task, the student will determine that a ratio for thinning paint could be one part thinner to two parts of paint, i.e. 1:2 ratio.**
6A.1 Identify area as the measurement of the surface of a figure and state units used (sq. in., sq. ft., sq. yd., sq. mi.).	See 6A.3
6A.3 Calculate the area of a given rectangle.	A brush painter must be able to calculate the area of a given ceiling. To accomplish this task, the student must be able to calculate the area of a given rectangle. **To demonstrate the ability to perform this task, the student will determine that if a ceiling is nine feet x twelve feet, the area is one hundred eight square feet.**
6G.3 Add o'clock time to a clock time interval.	See 6G.7

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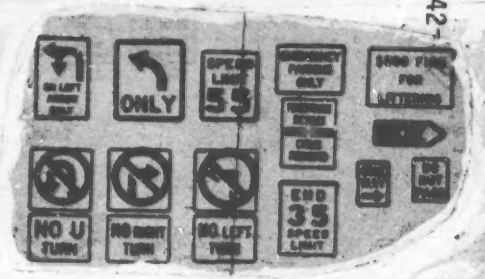
INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
8G.7 Estimate the duration of time actually required to perform routine functions within 50% of actual time.	A brush painter must be able to estimate the time it will take to complete a job. To accomplish this task, the student must estimate the actual duration of time expended to perform a routine function. **To demonstrate the ability to perform this task, the student will estimate the time it takes to travel to the ACE project office from the student's home.**
13A.1 Given letters of the alphabet in random order, read each letter and pronounce each letter correctly.	See 15A.3
15A.2 Read words from the labels of frequently used products or of products used in a given occupation.	A brush painter must be able to read labels on paint, varnish, etc. To accomplish this task, the student must be able to read words from labels of frequently used products. **To demonstrate the ability to perform this task, the student will read the following:** **Tex-Cote,** **Spred Satin,** **Pratt and Lambert,** **Glidden,** **Benjamin Moore.**
15A.3 Read and use words common to the vocabulary of a given occupation.	A brush painter must be able to converse with customer and co-workers. To accomplish this task, the student must be able to understand the occupational vocabulary. **To demonstrate the ability to perform this task, the student will match the following with 90% accuracy.** **A. acrylic** **B. bench** **C. steelwool** **D. solvent** **E. lacquer** **F. sander** **G. rust proof** **H. stanchion** **I. hoist** **J. garnet paper** **K. latex** **L. paint thinner**
1. a spirit varnish [as shellac] **2. incapable of rusting** **3. to raise into position by or as if by means of tackle** **4. a long worktable** **5. an upright bar, post or support** **6. a machine that sands surfaces [as wood, metal or plastic]** **7. an abrasive paper with crushed garnet as the abrasive** **8. an abrasive material composed of long fine steel shavings** **9. fluid which liquifies paint** **10. a water emulsion of synthetic rubber or plastic used in coatings [as paint]** **11. relating to acrylic acid or its derivatives** **12. a substance which dissolves or which can dissolve**	Key: 1. J, 2. K, 3. I, 4. L, 5. H, 6. F, 7. G, 8. C, 9. D, 10. B, 11. A, 12. E
15B.1 Read aloud and explain a series of common functional signs (e.g., safety signs, road signs, etc.).	A brush painter must be able to read common signs such as "Danger," "Wet Paint," etc. To accomplish this task, the student must be able to read common functional signs. **To demonstrate the ability to perform this task, the student will read the following California road signs:**

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES



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16A.1 Identify a form as a standard printed document with spaces for recording information.	See 16A.4
16A.4 Given a variety of common business forms such as work orders, job orders, issue and receipt vouchers, claims and purchase orders, answer factual questions based on the data on the forms.	A brush painter receives a pay check regularly and must be able to read it. To accomplish this task, the student must answer factual questions based on the data on forms. **To demonstrate the ability to perform this task, the student will refer to the paycheck below and determine that the gross pay is $190.40, the Social Security tax is $8.00, the withholding tax is $25.50, and the net amount is $156.90.**

Name Louis Stacey			
From 8/19		To 9/1	Incl.
Regular		190.	40
Overtime			
Total Earnings		190.	40
wh/tax	25. 50		
F.I.C.A.	8. 00		
Total Deductions		33.	50
Amount of Check		156.	90

No. 153

September 8, 19 67

PAY TO THE ORDER OF Louis Stacey $ 156.90

One hundred fifty-six and 90/100 ---------- DOLLARS

BEND AND BROADWAY OFFICE
Valley National Bank
LAND, CALIFORNIA

Tristram Shandy

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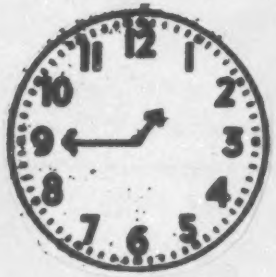
INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
21A.4 Given a standard clock, tell correct time to within five minutes of actual time.	A brush painter must be able to arrive at work on time. To accomplish this task, the student must tell time correctly. **To demonstrate the ability to perform this task, the student will determine the times shown below:** 4:00 12:15 15 to 1:00
22B.2 Complete a sample application form for employment in a legible manner.	A brush painter must be able to fill out a job application form before being hired. To accomplish this task, the student must complete a sample application for employment in a legible manner. **To demonstrate the ability to perform this task, the student will completely and legibly fill out form 28-A.**
28B.1 Given objects, sort by given classification criteria. The sorting should require a minimum of judgment. To oversimplify, sorting apples by types or tools by various generic classifications would be appropriate but sorting apples by quality or lumber by grades is a rating skill.	A brush painter must be able to sort tools. To accomplish this task, the student must sort by a given classification criteria. **To demonstrate the ability to perform this task, the student will sort the pencils in the room into two classifications:** **a. those under four inches long.** **b. those over four inches long.**



Adult Competency Education Project
609 Price Avenue – Suite 101
Redwood City, CA 94063

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28-A

EMPLOYMENT APPLICATION

1. NAME (Last) (First) (Middle)

2. ADDRESS (Number, Street, City, Zip Code) | 3. TELEPHONES Home ____ Business ____

Length of Time at Current Address | Time at Previous Address

QUESTIONS 4 THROUGH 10 MUST BE ANSWERED *YES* OR *NO*

	YES	NO
4. Do you have a valid California Drivers License?		
5. Do you claim Veteran's Preference? If *Yes*, complete the following and submit copy of DD214 with application. (Veteran's Preference is applicable to entry level positions, only.) SERVICE DATES From ____ To ____ **NOTE:** To receive credit you must have served at least 30 days in the United States Armed Forces in time of war, or national emergency declared by the President of the United States of America, and have been discharged or released under conditions other than dishonorable.		
6. May we contact your present employer as to your qualifications, character and ability?		
7. Have you ever been dismissed from employment or resigned to avoid dismissal for misconduct or unsatisfactory service? (If *Yes*, give details in Question 11)		
8. Have you ever received Workmen's Compensation? (If *Yes*, describe in Question 11)		
9. Have you any disease, nervous disorder, physical disability or infirmity? (If *Yes*, describe in Question 11)		
10. Have you been hospitalized for any reason in the past five years? (If *Yes*, describe in Question 11)		

11 Explanations to questions 7 through 10 (Use additional sheets of paper, if necessary.)

12 **EDUCATIONAL RECORD**

Circle Highest Grade Completed 6 7 8 9 10 11 12 | Name and Location of Last Elementary or High School | Graduated? Yes ☐ No ☐

Name and Location of College or University | Major | Credits or Degree

List any related business, trade, special training (give location and dates); estimated typing and shorthand speeds; San Mateo County typing and/or shorthand certificates (give certificate number and date); location of college placement file; and other related information as applicable.

13. **EMPLOYMENT INFORMATION** (Begin with your present employment and work back. Account for all time during the past ten years, including periods of unemployment. In addition, please describe any other related work experience, including volunteer work. Use additional sheets if more space is required.)

Present or Last Position

Employer ____
Address ____
Supervisor's Name & Title ____ Phone ____
Your Title ____
Duties ____

From ____ mo. year
To ____ mo. year
Total ____ years months
Full Time ☐ Part Time ☐
Last Salary ____
Reason for leaving ____

Employer ____
Address ____
Supervisor's Name & Title ____ Phone ____
Your Title ____
Duties ____

From ____ mo. year
To ____ mo. year
Total ____ years months
Full Time ☐ Part Time ☐
Last Salary ____

14. **PERSONAL REFERENCES - GIVE THREE** (Do not include previous employers or relatives.)

NAME	ADDRESS	PHONE NUMBER

A.C.E. COMPETENCY BASED JOB DESCRIPTION 29

OCCUPATIONAL TITLE: CARPENTER, APPRENTICE

D.O.T. CODE: 860.381 (4th Ed.: 860.381-026)

FACT SHEET

ACE Number: 29

CAREER LADDER:

FIRST LEVEL:
Laborer with Contractor

SECOND LEVEL:
Journeyman

THIRD LEVEL:
Foreman or Superintendent

FOURTH LEVEL:
Contractor

GED LEVEL:

Number of Annual Jobs in San Mateo County: 164 This number is based upon the San Francisco-Oakland SMSA, U.S. Census Manpower projections and the quarterly employment security application record system reports on local San Mateo County Employment Development Department job opening activity.

Job Prerequisites: Interview with contractor.

D.O.T. JOB DESCRIPTION: Constructs, erects, installs, and repairs structures and fixtures of wood, plywood and wallboard, using carpenter's handtools and power tools and conforming to local building codes. Studies blueprints, sketches, or building plans for information pertaining to type of material required such as lumber or fiberboard and dimensions of structure or fixture to be fabricated. Selects specified type of lumber or other materials. Prepares layout, using rule, framing square, and calipers. Marks cutting and assembly lines on materials using pencil, chalk, and marking gauge. Shapes materials to prescribed measurements using saws, chisels and planes. Assembles cut and shaped materials and fastens them together with nails, dowel pins, or glue. Verifies trueness of structure with plumb bob and carpenter's level. Erects framework for structures and lays subflooring. Builds stairs and lays out and installs partitions and cabinet work. Covers subfloor with building paper to keep out moisture and lays hardwood, parquet and wood-strip block floors by nailing floors to subfloor or cementing them to mastic or asphalt base. Applies shock absorbing, sound-deadening and decorative paneling to ceilings and walls. Fits and installs prefabricated window frames, doors, door frames, weather stripping, interior and exterior trim and finish hardware such as locks, letter drops and kick plates. Constructs concrete forms and pouring chutes. Erects scaffolding and ladders for assembling structures above ground level.

THE ACADEMIC REQUIREMENTS FOR THE JOB OF CARPENTER, APPRENTICE

Below are listed, first in general terms and then in specific competencies, the math and communication activities which a person must typically be able to carry out to function successfully as an apprentice carpenter.

The right hand column lists the exact competencies found to have been essential in our on-site employee interview. This column also notes the skills which are prerequisite to those competencies.

The left hand column states the skill in more general language. The controlled language of this column permits comparison of skills between occupations.

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These materials were developed pursuant to a grant from HEW, OE under PL93-380, Section 309. This does not necessarily imply endorsement of the content.

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
1A.1 Given a series of numbers in numeral form (e.g., 10, 20, 30), be able to copy series in handwritten form with 100% accuracy.	See 1A.5
1A.4 Write a whole number less than 10 million given the word name of the number.	See 1A.5
1A.5 Count a set of up to 100 objects and state or write the number of objects counted.	An apprentice carpenter must be able to count lumber and nails. To accomplish this task, the student must be able to count objects and state or write the number of objects counted. **To demonstrate the ability to perform this task, the student will count the number of pencils in the room.**
1B.1 Perform additions of whole numbers given instructions such as: What is the total of 8 and 5? 8 plus 5 is _____. Find the sum of 8 and 5. Add 8 and 5. 8 + 5 = _____. 8 +5 _____.	See 1B.5
1B.2 Find the sum of a set of whole numbers of 1-5 digits including cases where carrying is required.	See 1B.5
1B.3 Perform subtraction of whole numbers given instructions such as: 8 minus 5 is _____. Subtract 5 from 8. Find the difference of 8 and 5. 8 - 5 = _____. If you had 8 and gave away 5, you would have _____. 8 -5 _____.	See 1B.5
1B.4 Find the difference of two 1-5 digit numbers including cases where borrowing is required.	See 1B.5
1B.5 Solve a routine word problem using subtraction and/or addition of whole numbers.	An apprentice carpenter must be able to compute how much additional lumber will be needed for a job. To accomplish this task, the student must be able to solve problems using addition and/or subtraction of whole numbers. **To demonstrate the ability to perform this task, the student will determine that:** **If forty 2x4's are needed and only 33 are available, then 7 more are required.**
1C.1 Perform multiplication of two simple whole numbers (no remainder) given instructions such as: 6 times 2 is _____. Three two's are _____. The product of 6 and 2 is _____. 6 x 2 _____. 6 x2. _____.	See 1C.5

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INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
1C.2 Find the product of a given pair of whole numbers of which one number is up to 5 digits and the other number up to 3 digits.	See 1C.5
1C.3 Perform division of two simple whole numbers (no remainder) given instructions such as: 6 divided by 2 is _____. 2 into 6 goes ____ times. The quotient of 6 divided by 2 is ____. 6 ÷ 2 = _____. $\frac{6}{2}$ = ____. 2) 6 = _____.	See 1C.5
1C.4 Find quotients of 1-5 digit dividends and 1-3 divisors including cases where there are remainders.	See 1C.5
1C.5 Solve routine word problems using multiplication and/or division of whole numbers.	An apprentice carpenter must be able to compute the number of studs per wall area. To accomplish this task, the student must be able to solve problems using multiplication and/or division of whole numbers. **To demonstrate the ability to perform this task, the student will determine that:** **If a wall is 21 feet long and studs are placed 16 inches apart, the wall will need 16 studs.**
1D.1 Use addition, subtraction, multiplication or division, as appropriate, in the solution of problems involving a combination of two or more functions with whole numbers.	An apprentice carpenter must be able to compute wall areas to determine the amount of wall board that will be needed. To accomplish this task, the student must be able to use addition, subtraction, multiplication or division as appropriate with whole numbers. **To demonstrate the ability to perform this task, the student will determine that:** **If a wall is 20 feet long and 9 feet high, it contains 180 square feet.**
2A.1 In a given diagram or illustration, name the fraction which represents a given number of parts out of a total number of equal parts.	See 2A.5
2A.2 Reduce a fraction to its simplest form (lowest terms).	See 2A.5
2A.3 Change improper fractions to mixed numbers and mixed numbers to improper fractions.	See 2A.5
2A.4 Write equivalent fractions for a given fraction given a new numerator and denominator.	See 2A.5
2A.5 Arrange a set of fractions and/or mixed numbers in ascending or descending order.	An apprentice carpenter must be able to drill holes of different sizes. To accomplish this task, the student must be able to arrange fractions and/or mixed numbers in ascending or descending order.

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
	To demonstrate the ability to perform this task, the student will determine that drill bits come in all sizes from 3/32 inch up to 3/4 inch and are most easily used if arranged by size. Confirm that the following fractions are in ascending order: **3/32, 5/32, 4/16, 5/8, 3/4.**
2A.6 Write what fractional part one number is of another in its simplest form.	See 2B.4
2B.1 Calculate the sum in simplest form of two or three common fractions with unlike denominators.	See 2B.4
2B.2 Calculate the sum in simplest form of two or three common fractions with unlike denominators.	See 2B.4
2B.3 Calculate the sum in simplest form of two or three mixed numbers with like and unlike denominators.	See 2B.4
2B.4 Calculate the sum in simplest form of two or three numbers which include at least one proper fraction and one mixed number.	An apprentice carpenter must be able to add the width of all openings to the walled space to check the length of a room. To accomplish this task, the student must be able to calculate the sum of two or three numbers using mixed numbers and fractions. **To demonstrate the ability to perform this task, the student will confirm that the following will match a 14½ foot wall length:** **one French door 6½ feet** **wall space 8 feet** **14½ feet.**
2B.5 Calculate the difference in simplest form of two common fractions with like denominators.	See 2B.8
2B.6 Calculate the difference in simplest form of two common fractions with unlike denominators	See 2B.8
2B.7 Calculate the difference in simplest form of two mixed numbers which have like denominators including cases where borrowing is required.	See 2B.8
2B.8 Calculate the difference in simplest form of two mixed numbers which have unlike denominators includmding cases where borrowing is required.	An apprentice carpenter must be able to bore holes of a certain depth. To accomplish this task, the student must be able to calculate the difference between two mixed numbers. **To demonstrate the ability to perform this task, the student will determine that:** **If an apprentice carpenter bores a hole 1 and 3/8 inches deep and needs the hole to be 2 and 1/4 inches deep, 7/8 inches more must be bored.**

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INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
2B.9 Solve a routine word problem using addition and/or subtraction of fractional numbers.	An apprentice carpenter must be able to plane doors to make them fit. To accomplish this task, the student must be able to solve a problem using addition or subtraction of fractions. **To demonstrate the ability to perform this task, the student will determine that:** **If a door is 2 feet, 1 and 1/4 inches wide and should be 2 feet, 1 and 1/8 inches wide, the carpenter can plane off 1/8 inch.**
2C.1 Calculate the product in simplest form of: a. a common fraction and a whole number, b. two common fractions.	See 2C.5
2C.2 Calculate the product in simplest form of: a. a mixed number and a whole number, b. two mixed numbers.	See 2C.5
2C.3 Calculate the product in simplest form of two or three numbers which include at least one common fraction and one mixed number and/or one whole number.	See 2C.5
2C.4 Calculate the quotient in simplest form of: a. a common fraction divided by a whole numbers; b. two common fractions; c. a whole number divided by a common fraction.	See 2C.5
2C.5 Calculate the quotient in simplest form of: a. a mixed number and a whole number, b. a mixed number and a common number, c. two mixed numbers.	An apprentice capenter must be able to order pre-cut board lengths and then cut them into smaller lengths. To accomplish this task, the student must be able to calculate the quotient of mixed numbers. **To demonstrate the ability to perform this task, the student will determine that:** **If an apprentice carpenter has 20 lengths of board, each 7½ feet long and cuts them into boards which are 2 and 3/4 feet long, then there will be 40 boards, 2 and 3/4 feet in length and 20 boards, 2 feet in length.**
2D.1 Use addition, subtraction, multiplication or division, as appropriate, in the solution of problems involving a combination of two or more functions with fractional numbers.	An apprentice carpenter must be able to use fractions of an inch in almost all computations. To accomplish this task, the student must be able to use addition, subtraction, multiplication and division as appropriate with fractions. **To demonstrate the ability to perform this task, the student will determine that the following are correct:** **1/2 + 3/8 = 7/8.** **7/8 - 1/8 = 6/8 or 3/4.** **7/8 ÷ 1/8 = 7.** **5/8 x 1/4 = 5/32.**
3A.2 Write a 1-4 place decimal fraction given the word name of the number.	See 3B.3
3A.3 Arrange a set of decimal fractions in ascending or descending order.	See 3B.3

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
3B.1 Calculate the sum of a set of decimal fractions.	See 3B.3
3B.2 Calculate the difference of two decimal fractions.	See 3B.3
3B.3 Solve a routine word problem using addition and/or subtraction of decimal fractions.	An apprentice carpenter must be able to meet specifications for heights of first floor, second floor, etc. To accomplish this task, the student must be able to solve a word problem using addition and/or subtraction of decimal fractions. **To demonstrate the ability to perform this task, the student will determine that:** **If the site elevation is 99.05 feet, the first and second floor elevations 9.06 feet and the third and fourth floors are each 10.06 feet, then the total site elevation is:** **99.05 feet** **9.06 feet** **9.06 feet** **10.06 feet** **+ 10.06 feet** **137.33 feet.**
5C.3 Write a ratio given a description of two numbers or items, one of which must be determined by addition or subtraction of the numbers in a given ratio.	An apprentice carpenter must be able to mix sand, cement and fire clay. To accomplish this task, the student must be able to write a ratio. **To demonstrate the ability to perform this task, the student will determine that:** **If an apprentice carpenter mixes sand, cement and clay in the ratio:** **three shovels sand,** **one shovel cement,** **one-half shovel fire clay,** **then, for two shovels of sand the proportions are:** **two shovels sand,** **two-thirds shovel cement,** **one-third shovel fire clay.**
6A.1 Identify area as the measurement of the surface of a figure and state units used (sq. in., sq. ft., sq. yd., sq. mi.)	See 6A.6
6A.2 Calculate the area of a given square.	See 6A.6
6A.3 Calculate the area of a given rectangle.	See 6A.6
6A.4 Calculate the area of a given triangle.	See 6A.6
6A.6 Solve a practical problem involving area calculations of a square, rectangle, triangle, and/or circle.	An apprentice carpenter must be able to figure the total square feet of areas. To accomplish this task, the student must be able to solve a problem involving area calculations. **To demonstrate the ability to perform this task, the student will determine that:** **If a wall is 9 feet by 12 feet it contains 108 square feet.**

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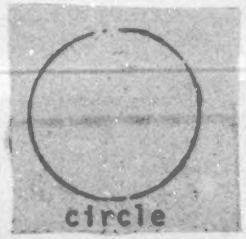
INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
6B.1 Identify perimeter as the length of the outer boundary of a plane figure and identify the units used as inches, feet, yards, etc.	See 6B.5
6B.2 Calculate the perimeter of a given rectangle or square.	See 6B.5
6B.5 Solve a routine word problem involving perimeter.	An apprentice carpenter must be able to figure perimeters of rooms. To accomplish this task, the student must be able to solve a problem involving perimeter. **To demonstrate the ability to perform this task, the student will determine that:** **If a room is 10 feet long and 9 feet wide, the perimeter of the room is 38 feet.**
6C.1 Calculate the volume of a given rectangular solid (including cubes).	An apprentice carpenter must be able to figure cubic yards of concrete. To accomplish this task, the student must be able to calculate volume. **To demonstrate the ability to perform this task, the student will determine that:** **If a driveway is 6 inches x 20 feet x 15 feet, then the cubic yards of concrete needed to cover the driveway are:** **6/36 x 6 2/3 x 5 = 1/6 x 20/3 x 5/1 = 100/18 = 5 5/9 cubic yards.**
6C.3 Calculate the number of board-feet (FBM) in a stated piece or pieces of lumber.	An apprentice carpenter must be able to compute the number of board feet in a given piece of lumber. To accomplish this task, the student must be able to calculate the number of board-feet in a piece of lumber. **To demonstrate the ability to perform this task, the student will determine that:** **the number of board-feet in a piece of lumber 1 inch x 12 inches x 1 foot = 1 inch x 12 inches x 12 inches = 1 board foot. [A board-foot = a unit of quantity for lumber equal to the volume of a board 12 x 12 x 1 inches.]**
6F.1 Add and subtract units of distance including cases where borrowing is required.	See 6F.2
6F.2 Measure a given distance or one dimension of an object with a ruler or tape measure correct within one unit of the scale reading.	An apprentice carpenter must be able to determine the dimensions of a foundation to within 1/8 inch. To accomplish this task, the student must be able to measure the dimensions of an object correctly. **To demonstrate the ability to perform this task, the student will determine that the following x is located at the 2 3/8 inch mark:**

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
8A.2 Round off a number (including mixed numbers) to a given unit of precision.	See 8A.5
8A.5 Write the measurement indicated on a sketch of a graduated scale: a. to a given precision when the scale is marked off in multiples of a whole number with or without subdivisions. c. to a given precision when the scale is marked off in whole numbers with or without subdivisions representing fractions such as halves, quarters, eighths, sixteenths, tenths, or fifths.	An apprentice carpenter must be able to measure door and window frames with great accuracy. To accomplish this task, the student must be able to write the measurement indicated on a sketch of a graduated scale. **To demonstrate the ability to perform this task, the student will use a ruler to determine the length of each of the following lines:**
9A.2 Convert units of distance from one metric unit to another (e.g., one hectometer equals 100 meters).	An apprentice carpenter must be able to read engineering specifications in the metric system. To accomplish this task, the student must be able to convert units of distance from one metric unit to another. **To demonstrate the ability to perform this task, the student will determine that the following are correct:** **one meter = 39.37 inches.** **a decimeter = .1 of a meter.** **a centimeter = .01 of a meter.** **a millimeter = .001 of a meter.**
11A.1 Identify rectangles, squares, triangles, circles, rectangular solids, cubes, pyramids, cones, cylinders and spheres from a set of objects, pictures of objects, or names of objects.	See 11A.3
11A.2 Identify: a. rectangles, squares, triangles, and circles as plane figures (two-dimensional). b. rectangular solids, cubes, pyramids, cones, cylinders, and spheres as solid figures, (three-dimensional).	See 11A.3
11A.3 Identify rectangles, squares, triangles, circles, rectangular solids, cubes, and cylinders given their definitions or characteristics.	An apprentice carpenter must be able to make rough sketches of roofs and floor plans. To accomplish this task, the student must be able to identify geometric shapes. **To demonstrate the ability to perform this task, the student will determine that the following are correctly identified:**

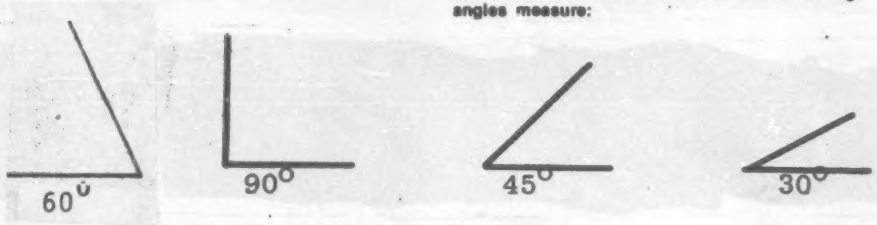
3 inches.

3 1/2 inches.

2 1/8 inches.

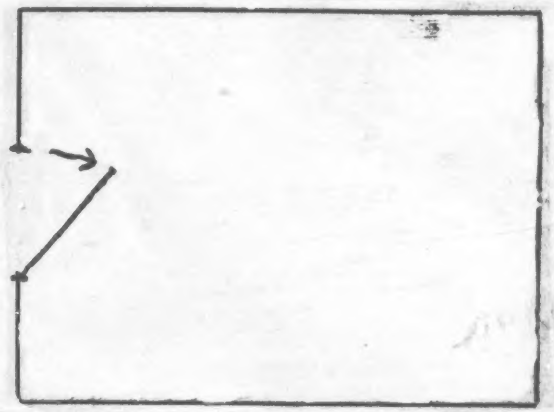


INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
11B.1 Identify 30°, 45°, 60°, angles from a set of such angles without the aid of a protractor	An apprentice carpenter must be able to lay sub-flooring at an angle to give more strength. To accomplish this task, the student must be able to identify 30°, 45°, 60° and 90° angles. **To demonstrate the ability to perform this task, the student will determine that the following angles measure:**



12A.1 Identify 1:4, 6:1, 1" to the foot, 1" = 5 mi., 1:50,000, etc., as examples of scales used to represent reductions or expansions of the actual size of an object.	See 12C.1
12A.2 Convert a scale measurement to true size given the scale.	See 12C.1
12A.3 Identify a given drawing as a map, blueprint, photograph, schematic diagram or assembly (exploded view) drawing.	See 12C.1
12C.1 Calculate actual dimensions of an object given a ruler and a simple scale drawing of the object.	An apprentice carpenter must be able to calculate actual dimensions from scale drawings. To accomplish this task, the student must be able to calculate actual dimensions of an object. **To demonstrate the ability to perform this task, the student will determine that the dimensions of the following room are nine feet x twelve feet based on the scale: 1/4 inch = one foot.**

INSTRUCTIONAL OBJECTIVE	JOB COMPETENCIES



13A.1 Given letters of the alphabet in random order, read each letter and pronounce each letter correctly.	See 16B.3
13A.2 Given the letters of the alphabet in random order, read each letter correctly in the proper alphabetical order.	See 16B.3
15A.1 Read a list of 50 words from a series of common used terms (e.g., from the Dolch List).	See 16B.3
15A.3 Read and use words common to the vocabulary of a given occupation.	An apprentice carpenter must be able to converse with customers and co-workers. To accomplish this task, the student must understand the occupational vocabulary. **To demonstrate the ability to perform this task, the student will match the following with 90% accuracy:** **A. level** **B. kick plate** **C. chisel** **D. concrete** **E. blueprint** **F. parquet** **G. foundation** **H. dowel** **I. calipers** **J. prefabricated** **K. frame** **L. insulation**

1. a patterned flooring
2. a measuring instrument with two legs or jaws
3. a metal tool with a cutting edge at the end of a blade
4. to fabricate the parts at a factory so construction consists mainly of assembling and uniting standardized parts
5. a finish hardware along the baseboard where traffic is heavy, protecting wall from damage by feet
6. a device for establishing a horizontal line or plane by means of a bubble in a liquid
7. a round rod of wood
8. to prevent transfer of electricity by seperating from conducting bodies
9. the constructional system that gives shape or strength
10. a hard strong building material made by mixing a cementing material and aggregate with water
11. the whole masonry substructure of a building
12. a photographic print in white on a bright blue background

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Key: A 6, B 5, C 3, D 10, E 12, F 1, G 11, H 7, I 2, J 4, K 9, L 8.

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
15B.1 Read aloud and explain a series of common functional signs, (safety signs, road signs, etc.).	See 16B.3
16A.4 Given a variety of common business forms such as work orders, job orders, issue and receipt vouchers, claims and purchase orders, answer factual questions based on the data on the forms.	An apprentice carpenter receives and must be able to read a paycheck. To accomplish this task, the student must be able to answer factual questions based on forms. **To demonstrate the ability to perform this task, the student will examine the paycheck below and determine from the check stub that the gross is $190.40, the federal income tax withheld is $25.50, the Social Security tax is $8.00 and the net pay is $156.90.**

Name Louis Stacey				
From 8/19		To 9/1		Incl.
Regular			190.	40
Overtime				
Total Earnings			190.	40
wh/tax	25.	50		
F.I.C.A.	8.	00		
Total Deductions			33.	50
Amount of Check			156.	90

No. 153

September 8, 19 67

PAY TO THE ORDER OF Louis Stacey $ 156.90

One hundred fifty-six and 90/100 ---------- DOLLARS

Valley National Bank
OAKLAND, CALIFORNIA

Tristram Shandy

16B.1 Describe the uses of charts and tables and define them as a visual way to give information in a compact and organized form.	See 16B.3
16B.2 State the type of information recorded on given charts and tables.	See 16B.3

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
16B.3 Given common reference tables and charts, such as organization charts, parts charts, reference tables, including charts and tables designed in matrix form (rows and columns), answer factual questions based on the data supplied.	An apprentice carpenter must be able to read schedule charts. To accomplish this task, the student must be able to answer factual questions based on a chart. **To demonstrate the ability to perform this task, the student will determine that the 1974 tax deductions chart below shows that if a person claims one exemption [and is not itemizing deductions] and if line 15 [adjusted gross income] is at least $875.00 and the person is single, and not the head of a household, then, no tax is owed.**

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If line 15 (adjusted gross income) is—		And you are—			
		Single, not head of household	Head of household	Married filing separate return claiming—	
At least	But less than			Low income allowance	% Standard deduction
		Your tax is—			
$0	$875	$0	$0	$0	$0
875	900	0	0	0	1
900	925	0	0	0	4
925	950	0	0	0	7
950	975	0	0	0	10
975	1,000	0	0	0	13
1,000	1,025	0	0	0	15
1,025	1,050	0	0	0	18
1,050	1,075	0	0	0	21
1,075	1,100	0	0	0	24
1,100	1,125	0	0	0	27
1,125	1,150	0	0	0	30
1,150	1,175	0	0	0	33
1,175	1,200	0	0	0	36
1,200	1,225	0	0	0	39
1,225	1,250	0	0	0	42
1,250	1,275	0	0	0	45
1,275	1,300	0	0	0	48
1,300	1,325	0	0	0	51
1,325	1,350	0	0	0	54
1,350	1,375	0	0	0	57

17A.5 Answer "what", "who", "when" and "where" questions using factual information from an article.	See 17A.7
17A.6 List the facts in a selection that support a given statement.	See 17A.7
17A.7 Do an exercise that requires recall of given instructions or information.	An apprentice carpenter must be able to use information about tools. To accomplish this task, the student must be able to recall given information. **To demonstrate the ability to perform this task, the student will recall that portable circular saws are designated by the diameter of the blades they use [e.g., 6 inch saw, 7 1/2 inch saw].**
19B.1 Interpret "what happened", "how" and "why" questions from an oral selection.	See 19B.9
19B.3 Answer questions which require a generalized interpretation of facts in an oral selection.	See 19B.9
19B.5 Identify what additional information you would like to know after hearing a conversation.	See 19B.9

INSTRUCTIONAL OBJECTIVES	JOB COMPETENCIES
19B.9 State and support a prediction based on information given in a selection.	An apprentice carpenter must be able to choose which saw to use for mitering. To accomplish this task, the student must be able to support a decision based on information. **To demonstrate the ability to perform this task, the student will determine that an apprentice carpenter would reject a jigsaw or saber saw as the best choice for crosscutting and ripping and choose a circular saw which can do mitering, leveling, rabbeting and grooving in addition to crosscutting and ripping.**
21A.3 Given a date (day, month, year) write the date using correct punctuation and capitalization.	See 21A.5
21A.4 Given a standard clock, tell correct time to within 5 minutes of actual time.	See 21A.5
21A.5 Given times of the day, be able to write time: a. 8:00 b. eight o'clock c. 8 o'clock	An apprentice carpenter must be able to fill out a time card. To accomplish this task, the student must be able to write times of day. **To demonstrate the ability to perform this task, the student will determine that an apprentice carpenter comes to work at 8:00 A.M., eats lunch from 12:00 noon until 1:00 P.M. and quits work at 5:00 P.M.**
22B.2 Complete a sample application for credit in a legible manner.	An apprentice carpenter must be able to complete a job application before being hired. To accomplish this task, the student must be able to complete an application form for employment in a legible manner. **To demonstrate the ability to perform this task, the student will complete 29-A.**

Adult Competency Education Project
609 Price Avenue – Suite 101
Redwood City, CA 94063

29 A

EMPLOYMENT APPLICATION

1. NAME (Last) (First) (Middle)

2. ADDRESS (Number, Street, City, Zip Code) | 3. TELEPHONES Home _____ Business _____

Length of Time at Current Address | Time at Previous Address

QUESTIONS 4 THROUGH 10 MUST BE ANSWERED *YES* OR *NO*

	YES	NO
3. Do you have a valid California Drivers License?		
4. Do you claim Veteran's Preference? If *Yes*, complete the following and submit copy of DD214 with application. (Veteran's Preference is applicable to entry level positions, only.) SERVICE DATES From _____ To _____ **NOTE:** To receive credit you must have served at least 30 days in the United States Armed Forces in time of war, or national emergency declared by the President of the United States of America, and have been discharged or released under conditions other than dishonorable.		
6. May we contact your present employer as to your qualifications, character and ability?		
7. Have you ever been dismissed from employment or resigned to avoid dismissal for misconduct or unsatisfactory service? (If *Yes*, give details in Question 11)		
8. Have you ever received Workman's Compensation? (If *Yes*, describe in Question 11)		
9. Have you any disease, nervous disorder, physical disability or infirmity? (If *Yes*, describe in Question 11)		
10. Have you been hospitalized for any reason in the past five years? (If *Yes*, describe in Question 11)		

11 Explanations to questions 7 through 10 (Use additional sheets of paper, if necessary.)

12 EDUCATIONAL RECORD

Circle Highest Grade Completed: 8 7 8 9 10 11 12 | Name and Location of Last Elementary or High School | Graduated? Yes ☐ No ☐

Name and Location of College or University | Major | Credits or Degree

List any related business, trade, special training (give location and dates); estimated typing and shorthand speeds; San Mateo County typing and/or shorthand certificates (give certificate number and date); location of college placement file; and other related information as applicable.

13. EMPLOYMENT INFORMATION

(Begin with your present employment and work back. Account for all time during the past ten years, including periods of unemployment. In addition, please describe any other related work experience, including volunteer work. Use additional sheets if more space is required.)

Present or Last Position

Employer _____
Address _____
Supervisor's Name & Title _____ Phone _____
Your Title _____
Duties _____

From _____ mo. year
To _____ mo. year
Total _____ years months
Full Time ☐ Part Time ☐
Last Salary _____
Reason for leaving _____

Employer _____
Address _____
Supervisor's Name & Title _____ Phone _____
Your Title _____
Duties _____

From _____ mo. year
To _____ mo. year
Total _____ years months
Full Time ☐ Part Time ☐
Last Salary _____

14. PERSONAL REFERENCES - GIVE THREE (Do not include previous employers or relatives.)

NAME	ADDRESS	PHONE NUMBER